

# THE MILLING WORLD

AND

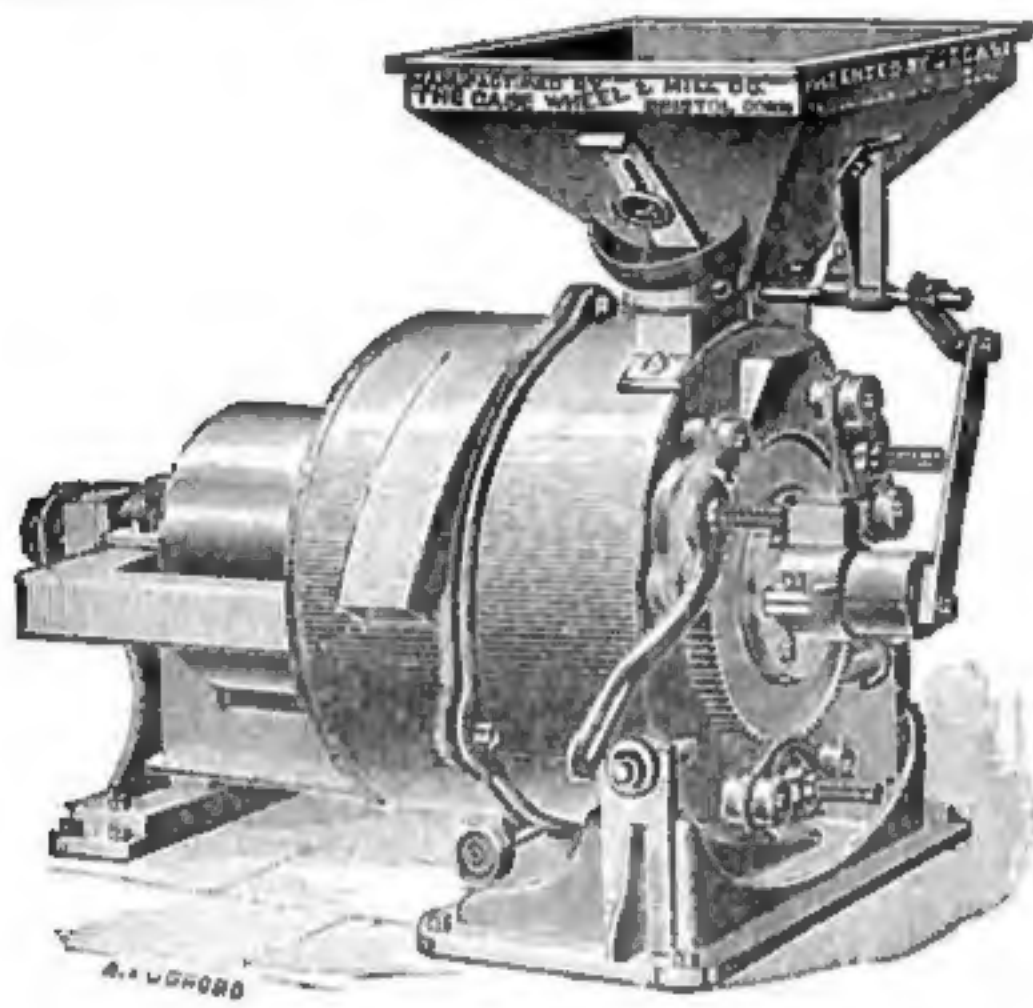
## CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY MORNING.

VOL. XX. No. 8.

BUFFALO, N. Y., APRIL 22, 1889.

\$1.50 PER YEAR.



### VICTORY OVER ALL OTHERS. SINGLE & DOUBLE VERTICAL GRINDING MILLS. (J. T. CASE'S PATENT.)

FACTS ARE MIGHTIER THAN ASSERTIONS. READ WHAT THEY SAY:

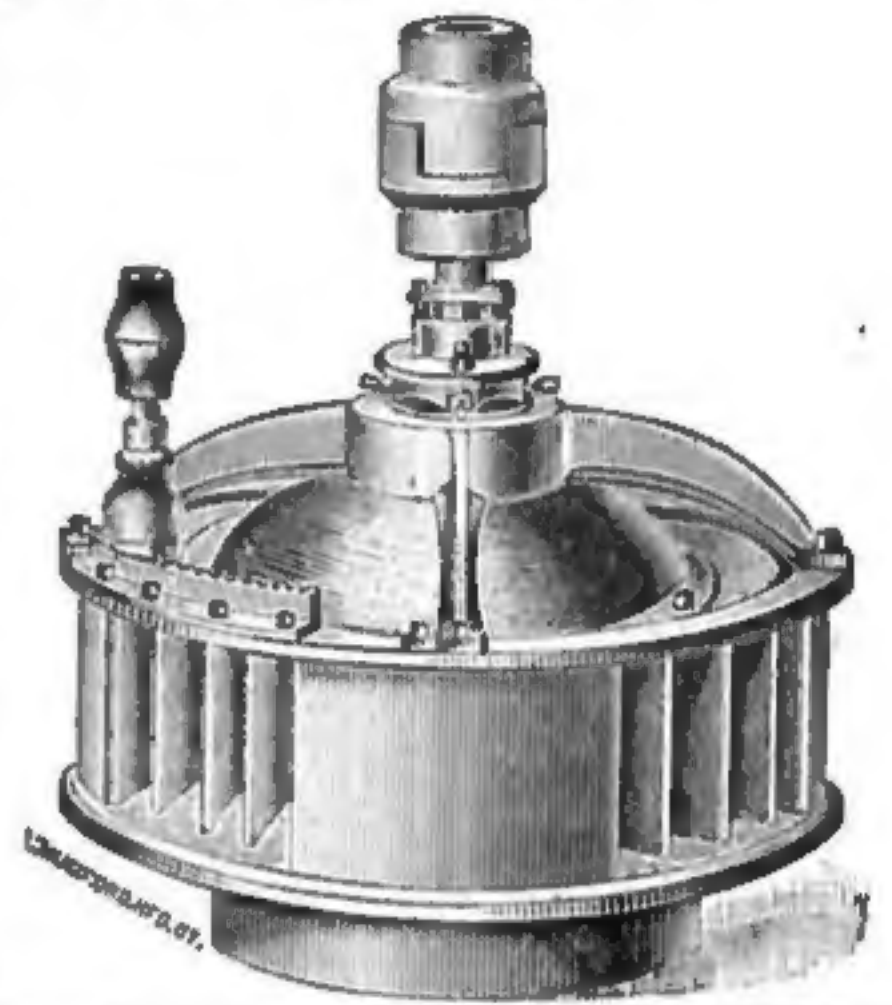
"Our 20-inch mill made by the Case Wheel & Mill Co. is in every respect satisfactory, easy to handle, and best results obtained of any mill in the country, with same quantity coal and power."—A. S. RUSSELL & Co., Meriden, Conn.  
"Superior to any mill in use."—Geo. WASTON, Bristol, Conn.  
"The best satisfaction in quantity and quality."—CHILD'S ELEVATOR, Manchester, Ct.  
"We take pleasure in recommending it."—GARLAND LINCOLN & Co., Worcester, Mass.

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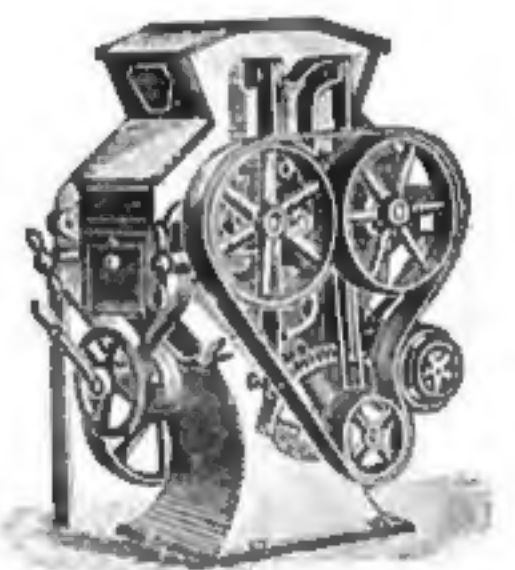
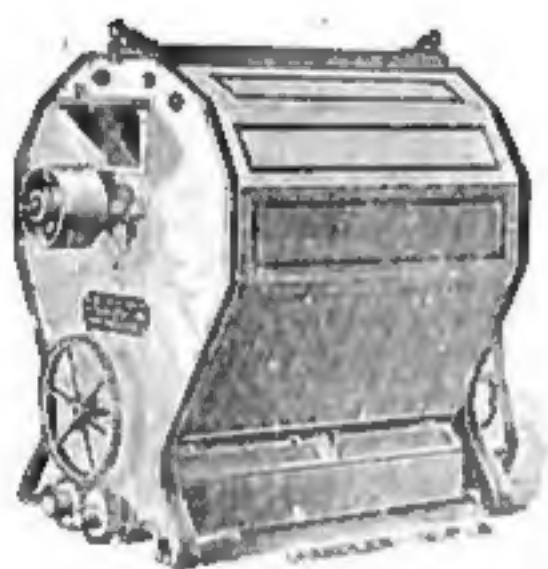
### The Improved National Turbine Water Wheel

The Best for Economy; The Best for Durability; The Best for Power. ONE THOUSAND FIVE HUNDRED NATIONAL WATER WHEELS IN USE Prove that our Assertions are Supported by the Leading Manufacturers in the Country. Send for illustrated catalogue and prices to the manufacturers.

**The Case Wheel & Mill Co., Bristol, Conn.**



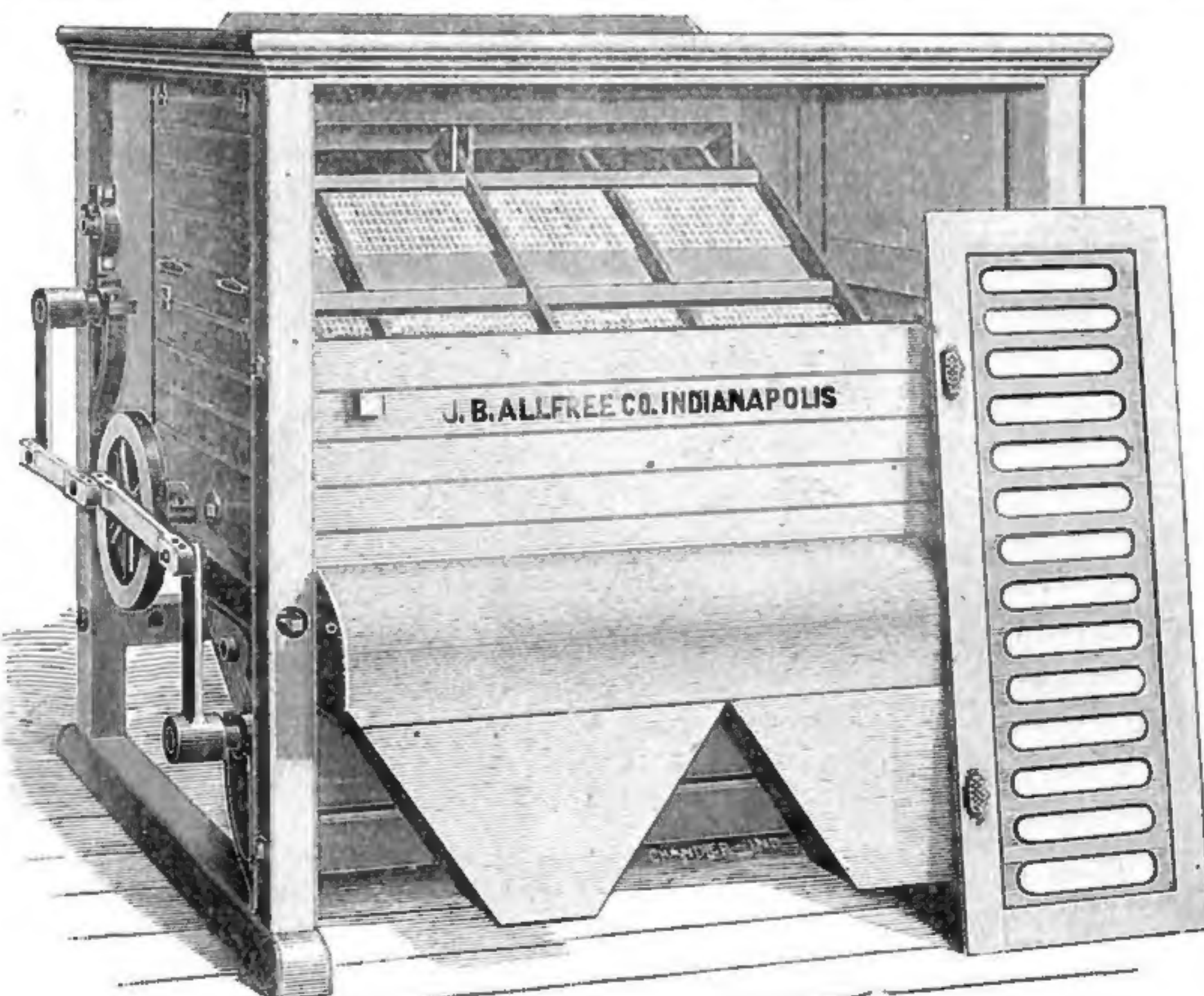
## THE ONLY NOISELESS SIEVE SCALPER.



Immense Capacity.

Power  
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It will Take Care of  
3 or 4 Breaks in a  
100-Barrel Mill.



Buy our Scalpers and  
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other machines; ours  
is Noiseless.

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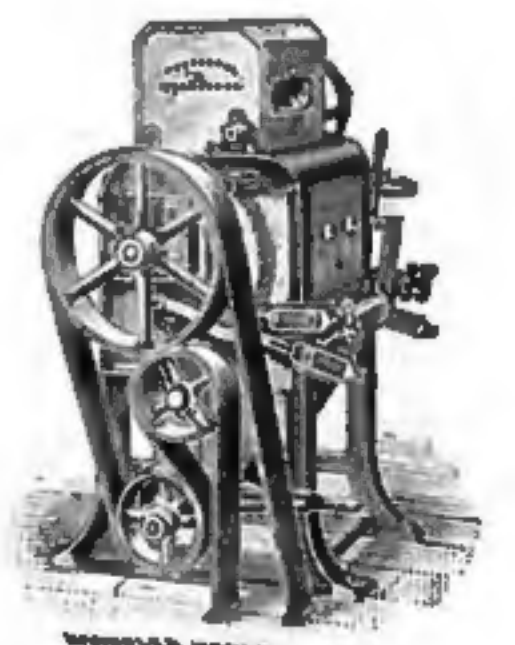
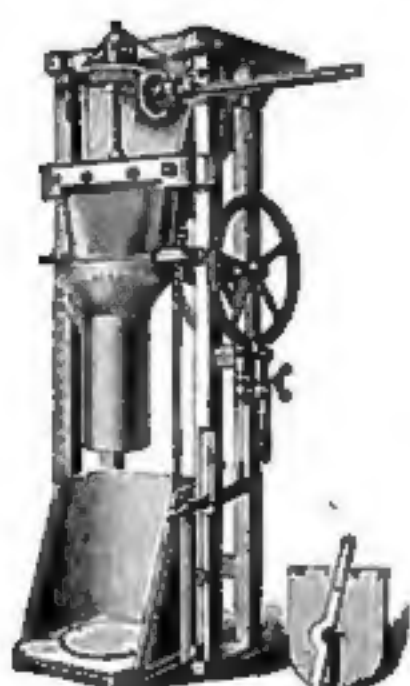
The J. B. Allfree Sieve Scalper.

—ADDRESS FOR PRICES, ETC.—

**The J. B. Allfree Co., Indianapolis, Ind.**

Mill Builders and General Mill Furnishers.

**DUFOR BOLTING CLOTH A SPECIALTY.**





# Some Millers' Opinions

## EXPRESSED THIS YEAR, 1889.

SHREVE, O., Jan. 25, 1889.  
THE CASE MFG. CO.

*Gentlemen:* We called at Bank Jan. 22d and paid our last note, which we believe closes our dealings so far as our contract with you for remodeling our mills is concerned. We want to say that we are entirely satisfied with all our dealings with you. Our mill is all we could expect, and is doing us good work. Extending to you our best wishes, we remain,

Very respectfully yours,  
FOLTZ & BRENNAN.

—O—

WAVERLY, O., JAN. 27, 1889.  
THE CASE MFG. CO.

*Gentlemen:* Although it has been but a few weeks since I have gotten my Waverly Roller Mills started as recently re-furnished with your system of breaks and rolls, yet I have already learned to my satisfaction that your outfit of milling machinery is the best in use to-day. I am now making a grade of flour that is equaled by few and excelled by none, in fact superior to any flour produced in this part of Ohio, and is fast distancing all competitors in the market. I can conscientiously recommend you as General Mill Furnishers.

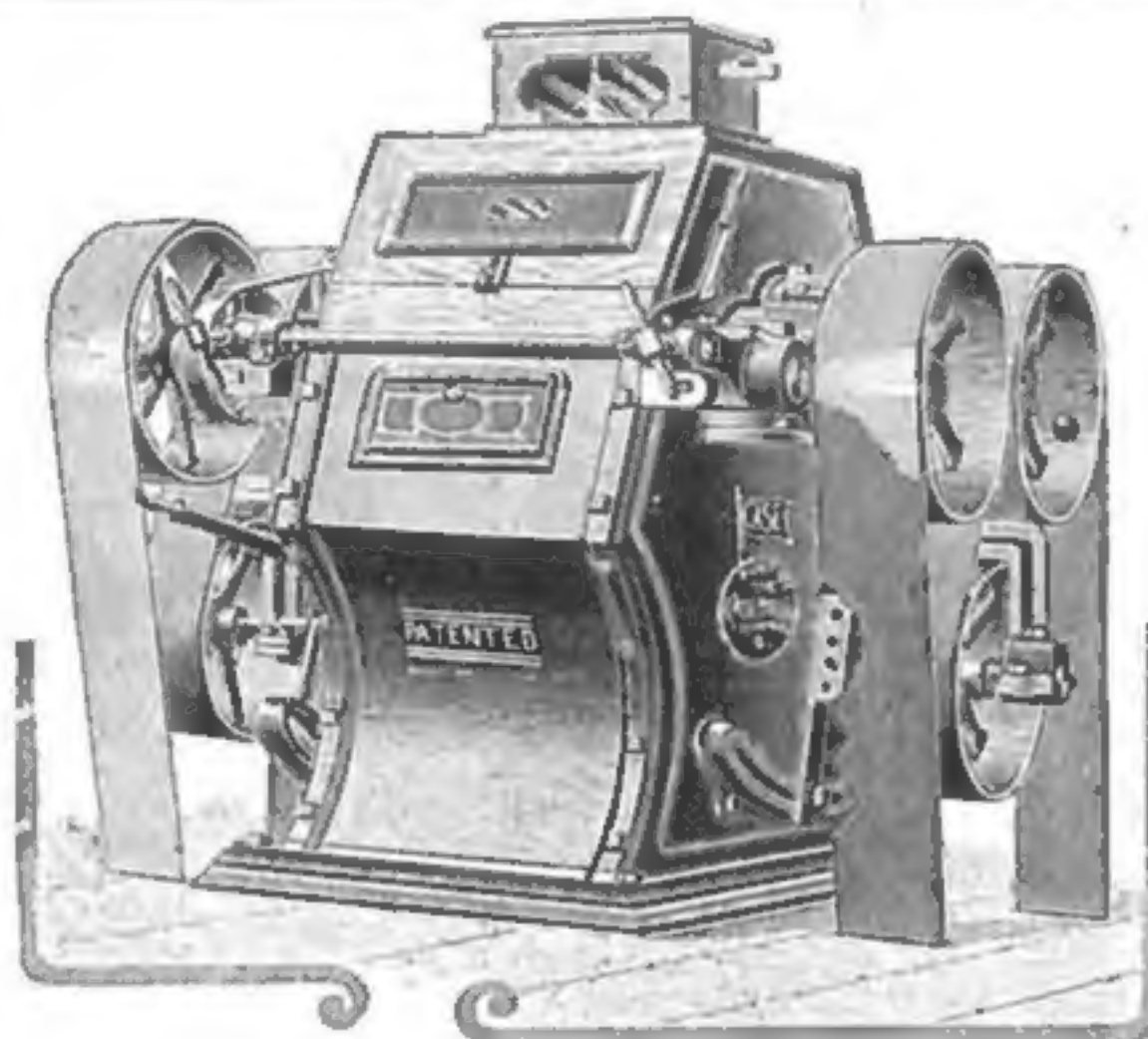
Yours truly,  
JAS. EMMETT.

E. M. NEWTON. D. B. SMITH. G. TERRY.  
OFFICE OF GUTHRIE MILL CO., }  
GUTHRIE, KY., Feb. 26, 1889. }

CASE MFG. CO.

*Gentlemen:* Yours of the 20th to hand and in answer to inquiry about the five Inter-Elevator Flour Dressers bought of you will say that they are working perfectly satisfactory, and we regard them as being the best bolts we have ever seen, and if we had to build another mill, would use no other. We will take pleasure in showing and recommending them to any one who may be in need of a Flour Dresser. Wishing you much success in the future, we remain,

Yours truly,  
GUTHRIE MILL CO.,  
By E. M. Newton.



*The Gem Roll of the World.*

LEONIDAS, MICH., Feb. 4, 1889.  
THE CASE MFG. CO.

*Gentlemen:* In reply to yours of the 31st ult., as to how I liked your machinery, would say I have a 3-break mill using 3 double stands of 6x18 Case rolls, one double stand of 6x15 rolls made by another firm. We started our mill September 1, 1888, and I must say *your rolls are more than you claim for them.* They started from the word "go." Not a single "hot journal," or anything else to cause any trouble in the least. The other stand has been a continual bother from the start, running hot, and the feed would not work only in bunches, and let me say right here *that they cost me more money than the Case did.* and I mean in the near future to displace it by a Case. Your feed is *simply perfect.* It feeds even the full length of the rolls, and the beauty of all is we can stop and start the Case Rolls without touching a single lever; the other stands wants two men to stop and start. I also have a double stand of 9x18 Case rolls for feed. It does good work with half the power a 36-inch buhr took for same amount of work. Should you wish to send any parties here to see my mill at work, I can prove to them all I have said. With very best wishes to the Case Company, I am, very respectfully yours,

GEO. ENGEL,  
Successor to Espenhain & Engel.

# WE BUILD NONE BUT FIRST-CLASS MILLS

## AND WILL GUARANTEE

### Each Mill We Build to Produce Results Excelled by None

#### COMPLETE LINE OF MILL SUPPLIES AT LOW PRICES.

We have the most Complete Plant for Regrinding and Recorrugating Rolls, and put in Any Style Cut Desired.

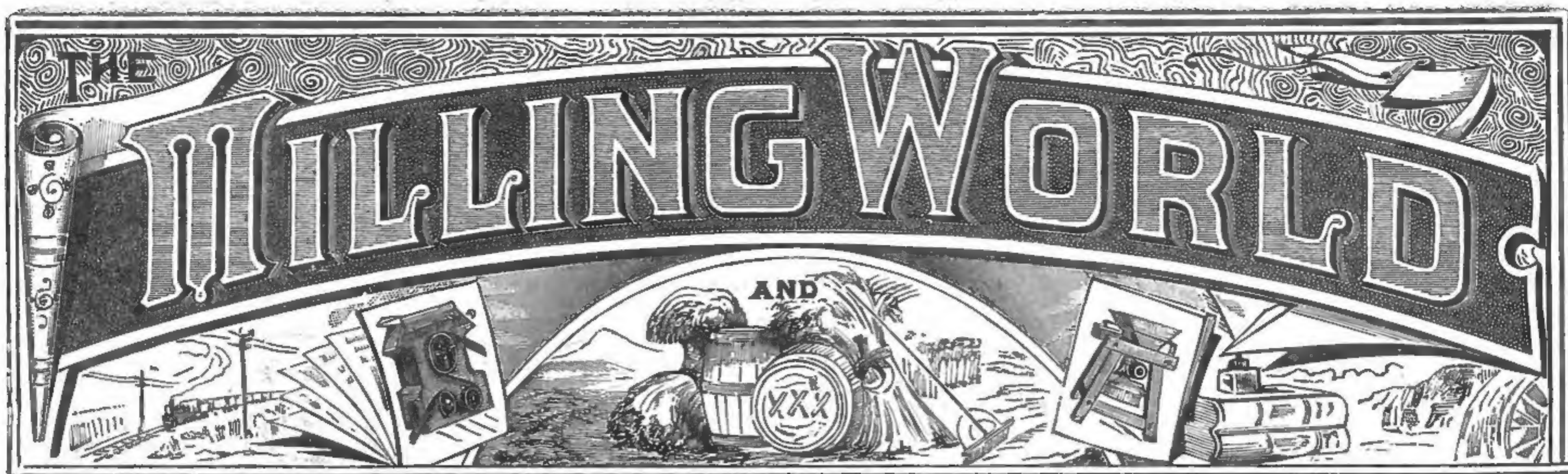
MACHINE WORK OF ALL KINDS DONE PROMPTLY.

—ADDRESS—

# THE CASE MFG. CO., COLUMBUS, O.

PLEASE MENTION "THE MILLING WORLD."





CHRONICLE OF THE GRAIN AND FLOUR TRADE  
PUBLISHED EVERY MONDAY MORNING.

VOL. XX. No. 8.

BUFFALO, N. Y., APRIL 22, 1889.

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OREGON, Washington and California wheats deserve to be better known to the millers east of the Rocky Mountains. Unprejudiced millers, who have examined those Pacific Coast wheats, find them good, fine, strong and desirable.

THE sensationalists are already working the chinch-bug vein in the wheat-crop reports. Some of the more ignorant and more venturesome liars are reporting serious damage by chinch-bugs in spring-wheat sections where sowing has not yet been completed. The early liar is evidently determined to catch the chinch-bug. If the chinch-bug would only tackle the crop-liars, gods of the mills! That would be something to the point!

INDIAN soft wheats, both white and red, of the crop now being harvested, are reported to be even worse than usual, if that be possible. The Indian wheats are no more undesirable, no nastier, no more inferior than usual. The yield in India promises to be below the average in quantity, and the prospect now seems to indicate an exportable surplus considerably less than that of the crop of 1888. European millers are not enthusiastic over Indian wheat. Even the best of it is undesirable stuff.

ERASTUS Wiman, in his comical pamphlet, "The Greater Half of the Continent," boasts that the province of Ontario is twice as large as New York, Ohio and Pennsylvania, and equal, if not superior, to those States in agricultural capacity. Mere size does not count, however, as Ontario can count only a little over a million inhabitants, while New York, Ohio and Pennsylvania can count nearly 15,000,000 inhabitants. One city in one of those States has more population than the entire province of Ontario. Agricultural capacity is one thing, agricultural achievement is another thing. In 1887 New York produced 10,137,000 bushels of wheat, Ohio 36,000,000 bushels and Pennsylvania 18,255,000 bushels. Compare those figures with the paltry 8,000,000 or 9,000,000 bushels raised in Ontario!

In another column we give space to the letter of Chairman Smith of the executive committee of the Millers' National Association to the members of that committee. Particular attention is called to the communication. If it outlines the programme of the Milwaukee convention at all, it indicates that the Milwaukee convention in June, 1889, will be merely a repetition, on a somewhat extended scale, of the Buffalo convention in June, 1888. In other words, it will be a flour-dealers' convention, a flour-sellers' convention, an exporters' convention, a convention for all the men connected with the milling industry except the men who actually make the flour. It will be Uncle Tom's Cabin with a Hamlet substituted for Uncle Tom. Mr. Smith urges the formation of a "new association" representing a possible daily production of 250,000 barrels of flour, which is quite a curious figure to employ as a basis, as it means a yearly production of 78,250,000 barrels, while the total production of the United States mills is several millions of barrels less, and the consumption of the country many millions less. It is possible that, having grown tired of small things that grow con-

stantly less, the Association now proposes to do great things and to assume ownership of the earth. Many suggestions in Mr. Smith's letter are wise and valuable, and the millers could possibly do all that he suggests if they were to co-operate thoroughly. The National Association has so long meant nothing to the average miller that it will probably prove a stupendous work suddenly to galvanize it into life and to attract to its convention the millers who have for years shunned and ignored it. The basis Mr. Smith urges includes even the "small millers," and that is a decided improvement over the position assumed last year at the Buffalo convention, when some of the orators openly asserted that the Association had nothing to do with small mills. Bring out your programme, Gentlemen, and let the millers see what you intend to do.

MILL-BUILDING goes on merrily in spite of the oft-repeated declaration that "there is no longer any money in milling." Probably that declaration should read: "There is not so much money in milling now as there used to be." That reading would leave a chance for explaining the steady increase in the number of small and medium-sized flouring and grist mills in the United States. Small roller mills, ranging in capacity from 30 to 75 barrels a day, are springing up in many places where the old buhr-mills, unable to fight the roller mills, dropped out of sight several years ago, and, according to recent reports received from the proprietors, most of these mills are doing well. Particularly in the South is the growth in this direction perceptible. A glance over the record of 1888 and of the first three months of 1889 shows a surprisingly large number of these new mills of small capacity. Hundreds of them have been added to the list of steady flour-making concerns, and, although it is the custom of the Grand Moguls of the Millers' National Association to ignore these small mills altogether, their aggregate capacity entitles them to notice in summing up the situation in the flour-trade. A mill equipped to grind only 30 barrels a day stands for 10,000 barrels a year, and every barrel ground by any small mill means a barrel less ground by some large mill. A thousand 30-barrel mills means 10,000,000 barrels a year less to be ground by the 2,000, the 3,000, the 5,000 and the 7,000 barrel mills. Perhaps the mathematicians and the imaginationists of the National Millers' Association may get some new and valuable ideas of the relations existing between the large and the small mills, if they will only take the time and trouble to find out how many small mills there are in the country. It is perfectly plain that the importance of the small mills has been greatly underestimated. Recently the great mills in both the spring and winter wheat sections attempted to restrict output in order to relieve the overburdened markets. Restriction failed to relieve the markets. Why? Was it not because the small mills went right on grinding, and because their aggregate capacity, increased by the hope of advanced prices, was sufficient to make up for the restriction by the large mills? The small mills of the United States are a factor that may no longer wisely be ignored by the men who propose to regulate the flour-trade. That fact is becoming more and more apparent every day.



# The Canton Cabinet Filing Case Company, Canton, Ohio,

MANUFACTURERS OF

## The New Buckeye Document Case & Letter File; Also All Kinds Office Furniture



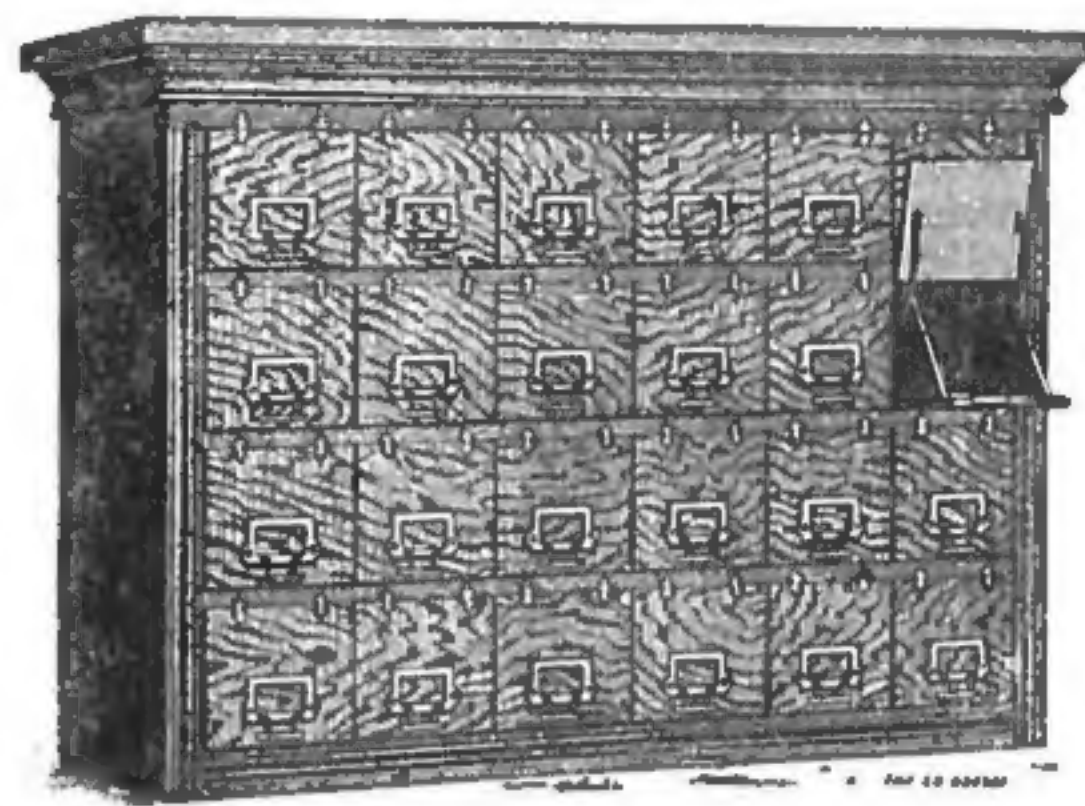
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**NO. 8** Represents one side of one of our Revolving Cabinet Letter Files and Document Cases Combined. It contains 80 Document Drawers and 8 Letter File Drawers. In filing letters we use first VOWEL, of name on front of drawer, and LETTER FOLLOWING first VOWEL on Index Sheet within drawer. We also make more exhaustive systems which contain from 6 to 100 or more Filing Drawers.

**NO. 1** Represents one of our small Document Cabinets, for use on desks or brackets. Action of drawer can be seen in the cut. When front is raised inner drawer comes forward, exposing contents of drawer for inspection.

*Our Cabinet Files are Conceded to be the Most Convenient of Any in the Market. They are Compact, Simple, Complete, Durable and Ornamental.*

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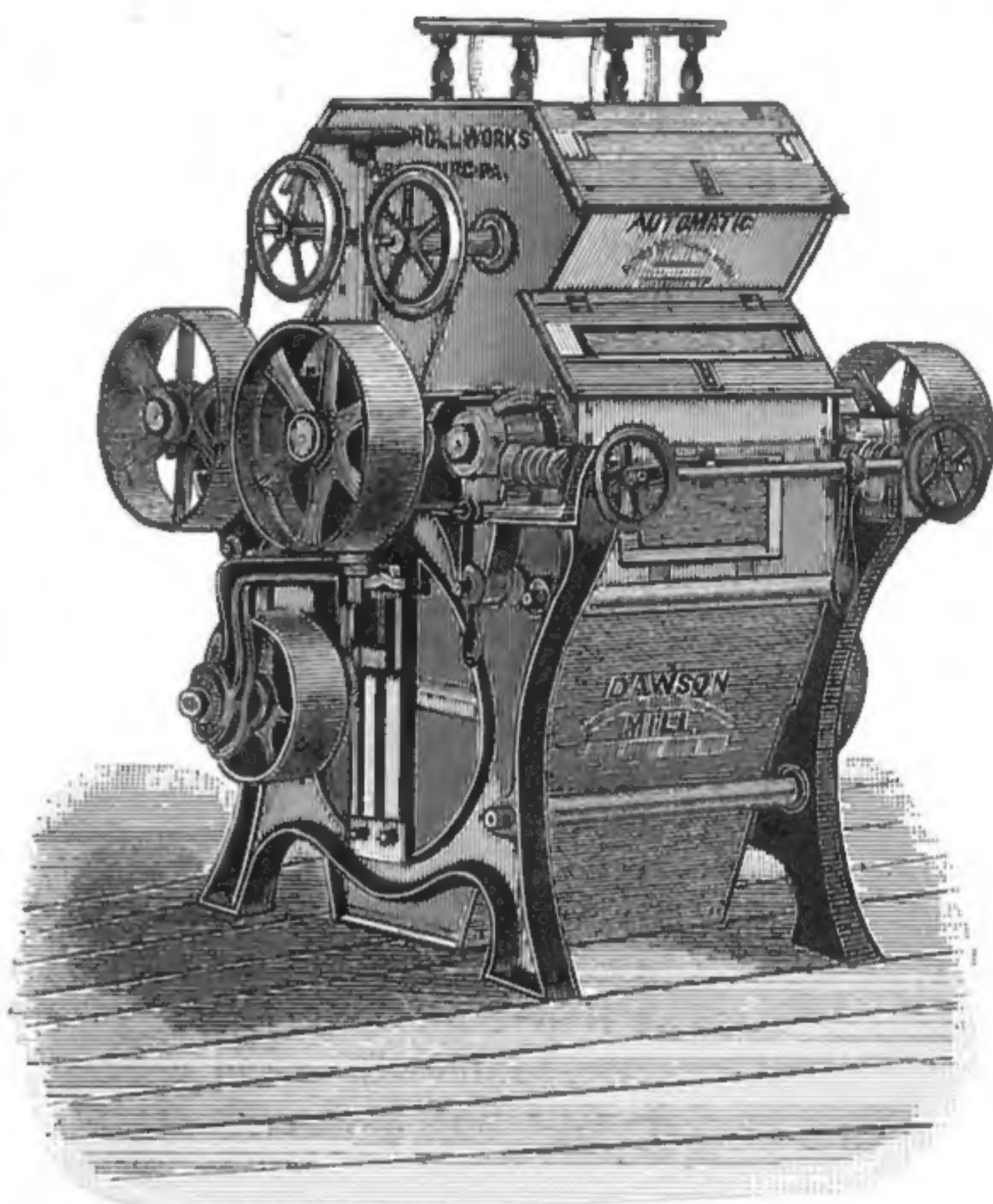
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Is acknowledged to be the very best in the market. It has our Patent Automatic Centrifugal feeder, never failing to feed the stock the full length of rolls in an even sheet. It is the Latest and Best feed out, uses less power and is simple in construction. It can be placed on any style of machine with little expense. We use for roll bearings phosphor-bronze metal which will admit rolls being run at any speed without heating and with little friction, and uses little oil. We use the Dawson Corrugation, which is admitted the best in long or short system mills as the action is granulating rather than CUTTING.

*We have a large plant to Re-grind and Re-Corrugate Rolls.*

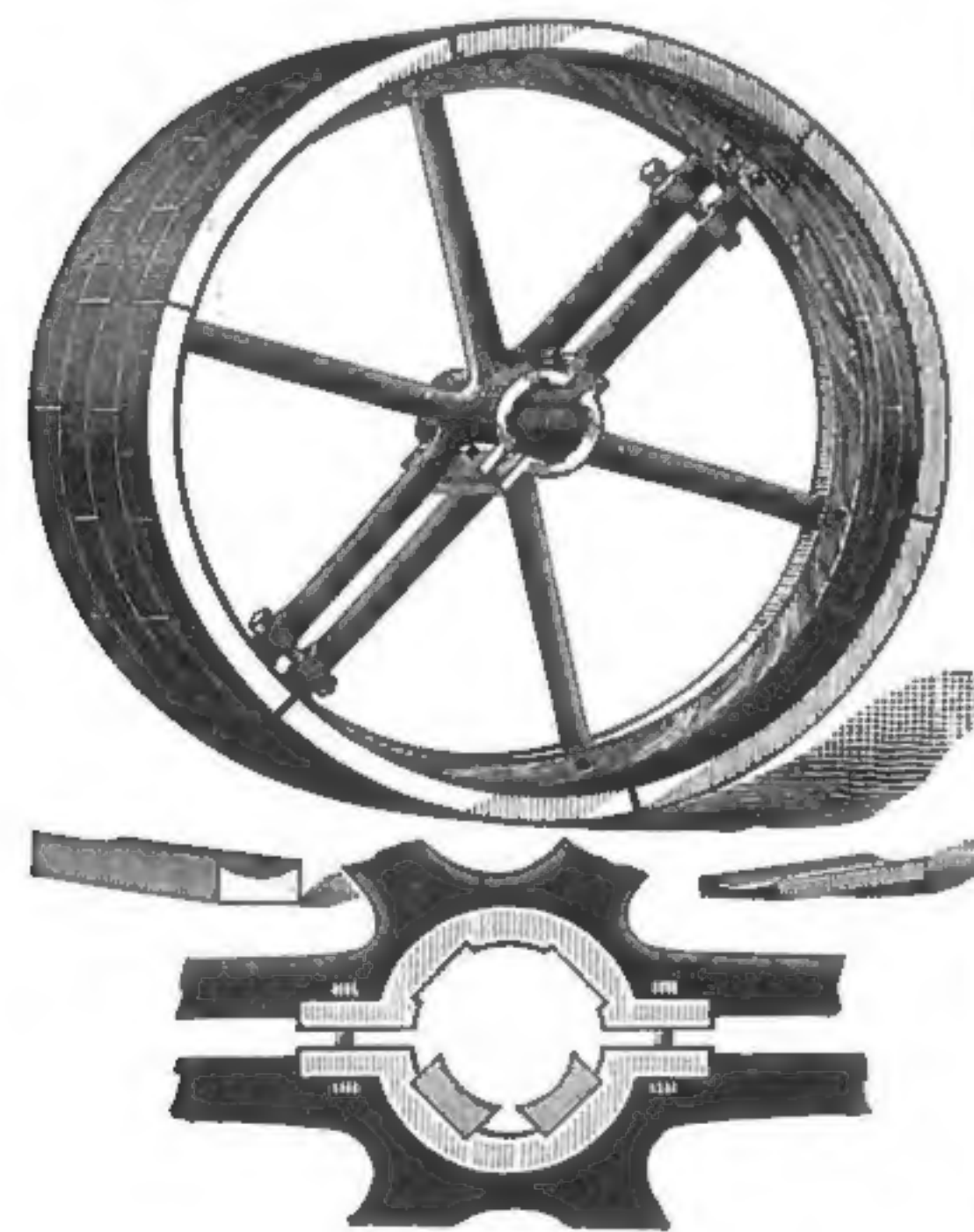
Owing to our late increased facilities and central location we are enabled to ship goods promptly on the shortest notice.

PARTIES CONTEMPLATING REMODELING THEIR MILLS OR BUYING ANY ROLLER MACHINES ARE REQUESTED TO PUT THEMSELVES IN CORRESPONDENCE WITH US.



FOR PRICE LISTS AND CIRCULARS, ADDRESS,

## Dawson Roll Works, Harrisburg, Pa.



### BIRD & CRANE MFG. CO., KALAMAZOO, MICH.

MANUFACTURERS OF PATENT

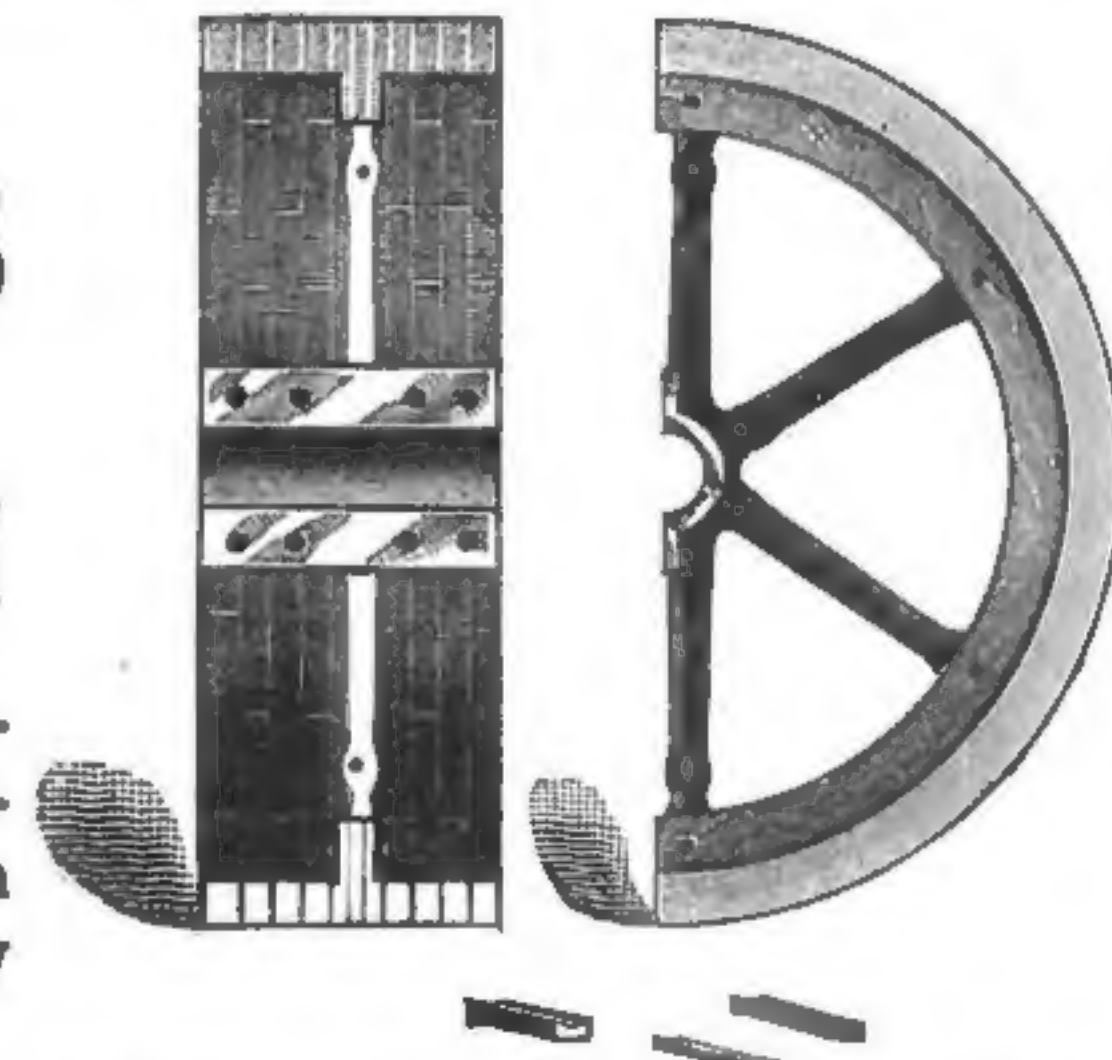
## Wood Split Pulleys

WOOD RIM WITH IRON ARMS.

### The Best Pulley on Earth!

Is very easily and quickly adjusted to Shaft. Has Patent Iron Bushings Interchangeable, to Fit Different Diameters of Shafts. Has FOUR or SIX Bearings on Shaft. This fastening never slips. Every Pulley strongly built and perfectly balanced.

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# THE MILLING WORLD

AND  
CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY. OFFICES: { Corner Pearl and Seneca Streets,  
Over Bank of Attica.  
McFAUL & NOLAN, - - - PROPRIETORS.  
THOMAS MC FAUL. JAMES NOLAN.

## HUBNOTIPTION.

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To all Foreign Countries embraced in the General Postal Union, \$2.25 Per Year, in advance.  
Subscribers can have the mailing address of their paper changed as often as they desire. Send both old and new addresses. Those who fail to receive their papers promptly will please notify at once.

## ADVERTISING.

Rates for ordinary advertising made known on application.  
Advertisements of Mills for Sale or to Rent; Partners, Help or Situation Wanted, or of a similar character One cent per word each insertion, or where four consecutive insertions are ordered at once, the charge will be Three cents per word. No advertisement taken for less than 25 cents. Cash must accompany all orders for advertisements of this class.  
Orders for new advertisements should reach this office on Friday morning, to insure immediate insertion. Changes for current advertisements should be sent so as to reach this office on Saturday morning.

## EDITOR'S ANNOUNCEMENTS.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trades.  
Correspondents must give their full name and address, not necessarily for publication, but as a guarantee of good faith.  
This paper has no connection with a millfurnishing house and aims to represent the trade without prejudice, fear or favor.  
Address all communications

**THE MILLING WORLD,**  
BUFFALO, N. Y.

Entered at the Post Office, at Buffalo, N. Y., as mail matter of second-class.

## SITUATIONS WANTED.

Advertisements under this head, 25 cents each insertion for 25 words, and 1 cent for each additional word. Cash with order. Four consecutive insertions will be given for the price of three.

## BUCKWHEAT MILLING A SPECIALTY.

A reliable Roller Miller wants work. Can make one-third more buckwheat flour than average millers, conditions the same. Granulated meal, etc. H. N. Z., 228 James street, Buffalo, N. Y. 710

## SPECIAL ADVERTISEMENTS.

Advertisements of Mills for Sale or Rent, Partners Wanted, Machines for Sale or Exchange, etc., etc., cost 1 cent per word, for one insertion, or 3 cents per word for four insertions. No order taken for less than 25 cents for one insertion, or 50 cents for four insertions. Cash must accompany the order. When replies are ordered sent care of this office, 10 cents must be added to pay postage.

## MILL FOR SALE.

Flour mill; water power; good location; on easy terms. For information address, THOS. BRODERICK, Byron, Olmsted County, Minn. 611

## FOR SALE OR RENT.

Grist-Mill and Woollen Factory. Also large two-story frame building. Very convenient for woodenware works. Good water power and shipping point, on line of three railroads. Apply to M. D. OLNEY, Irvine, Warren county, Pa. 611

## MILL MACHINERY FOR SALE.

One 24-Inch Portable Mill, wood frame, capacity 15 to 20 bushels per hour; new, best make.  
One 20-Inch Portable Mill, iron frame, capacity 12 to 16 bushels per hour; new, best make.  
One No. 0 Standard Combined Separator, Smutter and Brush Machine; new, best make.  
One 20-Inch Vertical Portable Mill, French Buhr Stone, hung on horizontal shaft; capacity 25 to 40 bushels per hour; new, best make.  
One 14-Inch Vertical Feed Mill; best make, new, a bargain.  
One No. 6 Dustless Separator; new, a bargain.  
One No. 1 Full Rigged Combined Dustless Separator; new, a bargain.  
Four Corn Cob Crushers, right or left hand, driven from above or below, best make; capacity 40 to 60 bushels per hour.  
One No. 1 Scientific Corn Mill.  
Four No. 4 Scientific Feed Mills, Style K.  
Two No. 4 Scientific Feed Mills, Style L.  
One Double Roller Mill, 6x18, corrugated. Best make. New.  
Two No. 1 Corn Shellers. New.  
Two 12-inch 4-roll Rickerson Roller Mills. Smooth. New. Best make.  
One No. 2 Purifier. New. Best make. A bargain.  
For particulars address, FRANK SMITH, care of THE MILLING WORLD, Buffalo, N. Y. 5tf



HORIZONTAL (underrunner.)

If you are desirous of obtaining the best Mill or Cob Crusher, send for our catalogue and be convinced that our's fill the bill. Can not fail to please you. They are guaranteed to prove as represented.

C. C. PHILLIPS,  
OFFICE, 20 SOUTH BROAD STREET,  
PHILADELPHIA, PA.

## NEVER-FAILING WATER-POWER FOR SALE OR TO LET.

Situated at the junction of two rivers, 95 miles from New York City, on the West Shore Railroad. Mill site against track. A NATURAL ROCK DAM with from one hundred to one thousand horse power. Railroad siding on premises. Station, post and telegraph offices in sight. Factory employes to be had at low wages. Further particulars given by addressing. 411

HOWARD FINGER, - - SAUGERTIES, N. Y.

## FOR SALE.

One half or whole, or to rent, a first-class 4-run mill; stone building; never failing water power; good custom and retail trade Address, N. R. SHEPARD, Marcellus, Onondaga county, N. Y. 11

## FOR SALE.

Several good second-hand and new turbines of various styles. Second-hand price list and descriptive matter and prices of our new machines sent free. Every one interested in the shortest route to successful milling on rolls or in grinding corn and feed with the least expense of power, should address us before buying.

FLENNIKEN TURBINE CO.,  
Dubuque, Iowa.

CACOPHONICAL cachectical wegotism, complicated with hebetudinous micromental rhombo-cephalicity, continues to characterize the auto-inflatorial pseudo-philosophical mill-ing-editorial gabble that gushes from the spouting Minneapolis artesian bore.

"No wheat in reserve for June and July" is the cry in some quarters. "The mills in the northwest will have to stop grinding before the new crop is ready" is another cry in some quarters. At the same time there is no genuine indication that either cry is believed.

APRIL saw wheat go even lower than it was a year ago, and that happened on the shortest crop known for years. Influences that do not influence appear to be the regular style in these degenerate days. April brought low-grade flour to the lowest notch ever known in the New York market. Equally curious features are visible on every side of the grain and flour situation in the United States.

NOT a preliminary trumpet blast yet from Secretary Seamans or from any other influential or representative member of the National Millers' Association, and the Milwaukee convention is only two months away in the future. What is on? Are the members of the association going to try to hold one convention without the aid of the milling press? Are they going to scorn the journals that have dared to scold, to warn, to advise, to admonish them? Come, come, Gentlemen, it is time to be showing your hand. Mr. Secretary Seamans, come out of your hole and announce your programme. On all sides is heard the question: "Was ist los mit dem association?"

PROGNOSTICATOR Prime succeeded in getting all the spring-wheat seeding in Dakota finished about the first of April, but on the tenth of April Oliver Dalrymple, who runs a 40,000-acre wheat-farm in Dakota, stated that the seeding was nearly half done. But then, of course, whenever Dalrymple and Dakota facts disagree with Prognosticator Prime, so much the worse for the aforesaid Dalrymple and Dakota facts. Still, it might be well for the Prognosticator to keep up a show of speaking or sneaking acquaintance with facts, not necessarily for publication in his prognostications that do not prognosticate, but merely as a guarantee of bad faith in his prophetic functions and transactions.

MOTTOES for the unharnessed oratorical Niagaras who are preparing to launch the "greatest efforts" of their lives at the Milwaukee convention: 1. "Many words darken speech." 2. "Words may make this way; words may make that way; strange are the ways of words." 3. "The greatest talkers are the least doers." 4. "No great movement was ever inaugurated or carried through by the talkers concerned in it." The executive committee are welcome to the use of these mottoes. We suggest that they have them lettered in rose-buds on a white satin background, so that on the first day of the convention they show in buds, on the second day in half-blown roses, and on the third day in full-blown roses. That would make a unique feature of the assembly. Is it a go, Secretary Seamans?



## JAGO ON SINGLE-WHEAT MILLING.

British flour-makers are once more undergoing their periodical shake-up on the subject of single-wheatmilling. Professor William Jago, of Brighton, England, at the recent meeting of the National Association of Master Bakers and Confectioners, held in Liverpool, read a paper entitled "Should British Millers Grind Wheat Separately?" From that paper the following abstract is taken: "I propose, first of all, to adduce reasons why bakers should use flours prepared from single wheats, or what may be shortly termed 'single-wheat flours,' in preference to flours from unknown mixtures of wheats. It is well known that different wheats vary widely in character; some are valued because of their strength, others for their color, a third class because of their flavor, and another class because they are cheap, and hence are used as make-weights to as great an extent as the wheat mixture will bear. Now, for different kinds of bread these various qualities of the wheat are desired in different proportions, and, accordingly, we even now find that bakers mix their flours so as to get those results most serviceable to them; but the mixing generally is so much of 'Jones' flour, because it is usually a very strong flour, with so much of 'Smith's' flour, because it is either very sweet or very colory. This is of necessity an ineffective mixing, because if 'Smith's' or 'Jones' flour is made from a mixture of wheats, it follows that it must itself vary from time to time with alterations in the mixture. In fact, those millers who aim to produce a good all-round flour must, if successful in their endeavors, produce one which at the same time has no marked individuality about it. Hence, if a mixture being used by a baker is unsatisfactory, he can not well decide which way to make an alteration, because his millers' flours are in themselves unknown quantities to him.

"There is another reason why it seems to me a mistake for a baker to use flours from what are called miller's mixtures, and which we may term 'mixed wheat flours.' Most bakers divide their fermentation process into the two stages of sponging and doughing. The great advantage which accrues from this is that different varieties of flour can be used at each stage. Thus most of the flour used for strength is employed in making the sponge; in the dough those varieties of flour which give color and sweetness of flavor are commonly mixed in. Now if a miller prepares a mixture of just the same proportions of wheat as the baker would like in his flour for the whole loaf, yet the baker lies under a disadvantage in having his flour manufactured from those wheats already mixed. To get his best results he would desire to use the stronger portions of the mixture separately in his sponges, leaving the remainder for his doughs. This is obviously impossible with a mixed-wheat flour. Here, then, are two cogent reasons why the baker should demand single-wheat flours; to them I will add a third: It is cheaper to buy flours from single-wheats and mix them than to buy mixed-wheat flours. The baker should know the principle on which to mix flours, and if he has not this knowledge, and consequently delegates a portion of what is really his business to some one else (the miller), then, and rightly, he must expect and be prepared to pay the miller for mixing his flours for him. It is an open secret that among the most successful millers are those who mix flours judiciously. I do not grudge them one iota of such success, but at the same time I feel most strongly that bakers are thus giving up one of the most essential and profitable parts of their business to another class of tradesmen. I advance, therefore, in favor of bakers using single-wheat flours the three reasons of exact knowledge of constituents and properties of their flour; ability to use different flours for sponges and doughs, altering the proportion as exigencies may arise; and greater economy by buying and mixing for themselves rather than allowing the miller to do so for them.

"Thus far my remarks apply essentially to bakers, but as the title of this paper inquires, 'Should millers grind wheat separately?' I venture to place a short statement of the case before those members of the milling trade who honor us with their presence and attention. I know that at present there exists a demand for single-wheat flours, and I believe

that demand will increase. I can only say for myself that those bakers who refer to me for advice on selection of flours will be counseled to purchase those from single-wheats. I notice that this demand is at present being largely met by the sale of foreign flours. From America come two well-marked types of flour, the spring and winter wheat flours respectively; while among other varieties from that continent we have Californian and Oregon flours. Now all these have certain characters of their own; while another distinct class of flour reaching this country is the product of the mills of Austria-Hungary. Bakers who purchase these, I find, mix them according to their well-known qualities. I would suggest to millers that they meet the undoubted demand for such flours which exists by milling the same varieties of wheat separately. I already know many milling firms whose names are well known for their flour from single wheat. Already you can obtain British-milled spring American, winter American, Australian, Azima and English wheat flours; all these are fully the equal in quality of the flours from the same wheats milled in the respective countries where the wheats were grown. Indeed, my friend Mr. Thoms asserts that the best spring American patents he has ever used are milled in Scotland. There being this demand for single-wheat flours, I make the appeal to millers generally to prepare such flours, at any rate in sufficient quantity to meet the present and existing demand. I am sure I am only expressing a unanimous opinion when I say that bakers would rather buy from British millers than foreigners; but, on the other hand, bakers who wish single-wheat flours will naturally purchase them where they can get them, at home, if possible, but if not, from whosoever will supply them. I suggest, therefore, that more millers should adopt the attitude of saying they are prepared to mill single-wheat flours if desired, rather than convey the impression that bakers do not know what is good for them, but should open their mouths and shut their eyes, and receive the golden prize offered to them under the names of 'Supers, Whites and Households.' We who believe in single-wheat flours may be 'Cranks,' but we are now an appreciable and growing part of the flour-buying community; and, in the interests of millers themselves, I make the appeal to them to supply our requirements, and thus not force us to buy from abroad.

"In conclusion, a few words as to the use of single-wheat flours. Bakers seem almost afraid to try the experiment of buying flours of this sort; this dread is, perhaps, enhanced by sundry mysterious warnings from those interested in maintaining the *status quo*. As a first practical step I would suggest making small trial bakings on such flours as spring and winter Americans, Hungarian brands and pure English wheat flours. Notice in each case the characteristics of the bread, the texture, pile, flavor and color of the loaf. Then with this knowledge, try mixing them and again test. Having once got a knowledge of the properties of mixtures, use them in actual bread-making; then, as may be necessary, your mixture may be strengthened or otherwise altered in character as occasion may demand. One word of warning may be given. If you have a single-wheat flour, do not expect more qualities or virtues of it than the wheat can be reasonably expected to give. I had occasion the other day to examine the flour which a miller was supplying to a baker as pure English wheat flour. I asked him how he liked it. He replied: 'Not at all; it is far too weak.' I expressed surprise, as I knew the flour in question to be one of the very highest quality. He replied that flours he purchased from other millers, 'pure' English wheat flours, were much stronger and far superior. I asked to be allowed to examine these and reported to him that they were not English wheat flours at all, but mixtures containing more than half spring American flour. Now, here is a case in which a flour was being condemned because it was not fulfilling conditions impossible to the wheat. I venture to say that, if my friend had purchased his pure English and pure American flours separately and then mixed them, he would have secured his flour at a considerably lower rate than he was paying for it. If this recommendation of mine be adopted, it may be asked, What must millers do with the Indian and certain low and cheap



grades of wheat which come to this country? I am not, in the first place, sure of the necessity of their coming: but if so, I say, mill them for what they are, and sell them for what they will fetch."

#### PREPARING TO MOVE ON MILWAUKEE.

Preparations for the annual convention of the Millers' National Association, which is to be held in Milwaukee in June next, are about to begin. Following is the text of a letter sent out under date of April 13, from St. Louis, Mo., by Alexander H. Smith, chairman of the executive committee of the National Association, addressed to the members of that Committee;

*"To Members of the Executive Committee.*

*Gentlemen:* Our last meeting at Buffalo, on invitation of representatives of Milwaukee, adjourned to meet in that city, subject to dates fixed by us, and I suggest that if the proposed meeting is to be held, as it must be, unless we acknowledge that our Association has passed its days of usefulness, we should soon fix date and as far as possible state leading subjects for consideration and arrange for their proper discussion. The value of such meetings to the milling industry, over and above the pleasant social features which always attend them, has been abundantly shown during the very unsatisfactory conditions of the trade, incident to short and poor crops and consequent misleading speculation under which we have struggled since. The wise discussion of vital interests at Buffalo has stimulated organization, and more progress of the right sort has been made by us than ever before. Two leading Associations, the "Spring Wheat" and the "Central," have been formed and, by promoting reduction of output at a critical period, together with the institution of sundry reforms in methods of sales and collections, have so benefited millers generally that they have become believers in such compact, self-binding organizations as these direct results of our Buffalo meeting. Besides these, numerous local associations have been formed, all modeled more or less on the two general associations, and all doing much good to their members. In my opinion the prime object of our Milwaukee meeting should be to recruit the "Spring Wheat" and the Central Millers' (Winter Wheat) Associations until they include every miller in the country, regardless of whether they are also members of local, state or National Associations, and then the representatives of these should form the true National Association, taking up the good work that has been done, and perfecting it under closer authority over the individual to any extent that may be agreed on for the common good. The new association should represent a daily possible product of two hundred and fifty thousand barrels and would mean the power to enforce any reasonable reform of bills of lading, credits, production, prices and customs, and even to curb the giant, Speculation, within reasonable limits. All this and more can be done, if only the millers, who believe, nay, know, that it is possible and desirable, will join in good faith and help to accomplish. I suggest same dates as last year for our Milwaukee meeting, viz: 11th, 12th and 13th of June next, and that the committee meet on the 10th of June, to prepare for business. Please favor us with your views hereon, and with any suggestions that may occur to you as to how and what special subjects should, in your opinion, be presented to the convention.

#### POINTS IN MILLING.

A GERMAN writer on the theory of bread-making claims that flour mixed with bran-water will make seven or eight pounds more bread to 100 pounds than when mixed with ordinary water. This, he says, is due to the gluten dissolved from the bran. Admitting that such bread is dark, he believes it to be also more nutritious and digestible. It might be pertinent to inquire if German millers are in the habit of leaving their bran so rich in gluten that any such increase as seven or eight per cent. is possible from using bran-water in mixing bread. At that rate, German bran ought to contain most or all of the profits possible in German milling. All these startling stories of nutritious derivatives from bran pan out badly. I have yet to hear of the first case in which something has been extracted from nothing in paying or even in perceptible quantities.

CALIFORNIAN wheat is classed by certain British milling writers as one of the wheats that must be "washed" before grinding. Do the millers in California wash their wheat before grinding? Is the practice of "washing" general in the mills on the Pacific Coast? If not, then the British writers are doing Californian grain a gross injustice in classing it with the dirty Indian, Persian, Egyptian and other Oriental grains.

THE differential speed of rolls is of the greatest importance. Surprising changes in results promptly follow every

change in the differential. On fluted or grooved rolls the differential should be varied from 2 to 1 for the first break up to 3 to 1 for the sixth break. The miller will find that the quality of the grain being ground will largely control the differential. If he makes the speed too great, he will find the grain cut up, smashed up, chipped up into small bran and break flour. If he makes the differential too small, the grain will be merely squeezed and flattened without being opened, and in that case more pressure will be required, less semolina will be made and the bran will not be clean.

IN gradual-reduction mills the grooving of the rolls depends largely upon the style of groove used and the grain to be handled. Ordinarily in a six-break mill the grooves should run about as follows:

1st break	from 10 to 12 grooves per inch.
2nd	" " 12 " 16 "
3rd	" " 16 " 20 "
4th	" " 20 " 24 "
5th	" " 24 " 28 "
6th	" " 26 " 32 "

MANY flour-makers have failed to do satisfactory work on the gradual-reduction system simply because they do not follow the plainest common-sense rules. Often I find a miller blaspheming because his middlings do not act well in the processes of purification and reduction, when in reality he is ignoring the important principle of grading his middlings, which alone can insure perfect work.

GIVE the closest attention to the following points in starting a roller mill: 1. The rolls should be in the same plane and perfectly parallel. 2. There should be ample room for adjustment. 3. The rolls should be perfectly true. 4. The bearings should be well lubricated and all wear in them provided for. 5. The feed should be under perfect control.

COARSE semolina may be cracked on rolls running at equal speeds, when a mixture of germ is present. Fine middlings should not be treated on equal-speed rolls with heavy pressure, because the pressure would "cake" and "kill" the flour.

BUHRS are sure to "grind" whatever goes between them, whether it be bran or flour. The grain has only one part that is desirable in the flour, and that is the endosperm. All the other parts, the epicarp, the mesocarp, the endocarp, the testa, the germ and the embryonic membrane, should go to the offal, and they will, some of them, at least, go to the flour, where they are not wanted, if they are once allowed to get between the teeth of the buhrs. Modern milling, in its highest expression, provides for the separation of the desirable from the undesirable parts before the final reduction is made. Buhrs always grind. Rolls granulate. Between those two functions is the difference between the "old" and the "modern" processes of milling. The buhr may be made a most valuable assistant to the rolls in reducing the granulated roll products, after the separation alluded to is completed.

LACK of light is one of the bad features of the older mills. Even in the brightest sunlight it is impossible to see what is going on or where any thing is in some mills. The mills of recent construction are more wisely planned in this respect, large windows admitting plenty of light and air. Those who cling to their inbred love of darkness in mills can employ curtains to exclude light, but all the same their windows should be large and numerous and ventilation should be thorough.

MILL-BUILDERS often make the mistake of putting up the buildings without doors large enough to admit the machines. That mistake is often a serious one, as it forces the owner to extra labor, trouble and expense in putting in and taking out machinery. Provision should be made at the start for apertures large enough to admit the largest machine in the outfit without the necessity of tearing it apart. The builder



who plans a mill with a two-foot door, when a 3-foot or 5-foot machine is to be put in, is like the architect who plans a church or a house so that a coffin can only with the greatest difficulty be got in or out. Common-sense would suggest a door or aperture large enough to be convenient, and yet both owners and builders ignore this important requisite.

It is a fault in many buhr-mills that the stones are prone to become stuffed up and will not grind fine. In order to obviate this, many preparations and solutions have been introduced, some of which sell for a fabulous price. One of the best of these to be had was subjected to analysis and found to be very simple in its composition; in fact, if we take hot water, one gallon; borax, two ounces; washing soda, one-fourth pound, and three bits of sal-prunel the size of a small marble, and mix thoroughly and apply to the buhr with a scrubbing-brush, results will be obtained much more satisfactory than with nearly any of the commercial preparations. When the wheat contains much garlic it will not be necessary to take up the buhr at all. All that is required is to drop through the eye twice a day one of the balls of sal-prunel, and this will keep the buhrs sharp and clean, enabling the miller at all seasons to make finer flour and in greater quantity than usual.

ANNEXED is a table from an English work giving a description of the various qualities of buhrstones, speeds, dress, required power and capacity for grinding various kinds of grains and seeds, the diameter of the buhrstone being 4 feet in each case:

Substances Ground.	Description of Stone.	Porosity of Stone.	Nature of Stone.	Usual Dress.	Draft to fore-edge of furrow.	Power required.	Usual speed.	Capacity in bushels per hour.
Wheat—								
Hard.....	French	Close	Hard	10-4	3	4	120	4
Soft.....	do.	Open	Mild	10-4	3	4	120	4
Barley—								
Hard.....	Peak	do.	Hard	14-3	4	4	135	6
Soft.....	do.	do.	do.	14-3	4	4	135	6
Shelled Oats..	Peak	Close	Sharp	none	none	4½	150	10 cwt.
Maize .....	French	do.	Hard	10-4	3½	6	130	10 bshl.
Rye .....	do.	Open	do.	10-4	3½	4	120	4
Rice.....	do.	do.	do.	10-4	3½	6	140	7 cwt.
Splitting Beans ....	Peak or French	do.	do.	10-4	3½	4	100	50 bshl.
Grinding do	French	Close	..	10-4	3½	4	120	6
Splitting Peas	do.	Open	do.	10-4	3½	3	120	20
Millet .....	do.	Close	do.	10-4	3	4	120	10

In wheat the starch granules or cells are organized bodies which may be divided into three parts: First, an outer skin or envelope composed of cellulose; second, within the cellulose skin there are distinct granules filling the cell, called amylose, united in the larger cells into laminae or folds; third, the matter within these weakly organized amylose granules is known as granulose. Thus the starch cell is composed of a cellulose skin, amylose granules, containing or consisting of granulose matter. On bolting starch this granulose matter swells enormously, bursting the cellulose skin, when, cooled down to between 160° Fahr. and 170° Fahr., the diastase acts on it.

#### THE DETERMINATION OF GLUTEN IN FLOUR.

Millers who desire to test the amount of gluten in their flour will be interested in the following summation of practice by an investigator: In determining the value of various flours the most potent factors are the quantity and condition of the albuminoids. The great influence of the latter factor upon the products of baking is often overlooked. But in noting the effect of "aging" upon many varieties of flour its importance is immediately seen, for in this case both fresh and old samples contain about the same quantity of albuminoids, while the latter sample frequently loses quite appreciably, and sometimes altogether, the condition which makes the formation of tough, spongy dough possible; consequently the baking products from fresh and "aged" flour made from

grains equally valuable in the fresh state exhibit widely contrasted qualities.

In recognition of the importance of the nitrogenous constituents of flours in their relation to the "nutritive value," there have been devised for their estimation several simple methods capable of use without technical skill and with very simple means. These methods may be classed as chemical and mechanical. The former are generally volumetric processes, based upon the coloring action of nitric acid upon albuminoids, and therefore serve only to give an idea of quantity without regard to condition. In the mechanical process the steps taken are very similar to those adopted in the preparation of flour for baking. This process depends upon the insolubility and coherency of the albuminoid particles of dough when in proper condition, and it consists essentially in kneading in water the stiff dough, made from a given weight of flour, until the starch and soluble matters are removed, and weighing the residue. The gluten, as this residue is termed, does not exist in this state in the flour, but is formed very rapidly upon the addition of water. The nature of this change is not fully understood, but it is generally regarded as a kind of fermentation, due, according to Weyl, to the presence of an unorganized ferment, which he terms "plant myosin."

The process in detail is as follows: Weigh out 20 grams of the flour to be tested; or if a quite delicate balance is not at hand, a sufficiently large quantity may be taken to diminish the error due to lack of delicacy in the balance used. The flour must be carefully worked into a stiff dough by the addition of 50 to 75 per cent. by weight of water. Some chemists specify 50 per cent. invariably, but as securing a close similarity in the physical character of the dough with different samples is of the first importance, this rule is not to be commended. With duplicate tests the same quantity of water should be used. The preparation of the dough may be considered complete when it is smooth, perfectly homogeneous and without white particles of dry starch on its surface. Many authors recommend that the kneading in water shall follow immediately after the preparation of the dough; but since gluten seems to be a fermentation product, its quantity is affected by the duration of fermentative action. For a long time this point was not subjected to experiment, but recently Benard and Girardin have found quite an appreciable increase in the quantity of gluten during the period between thirty minutes and three hours after the preparation of the dough. My own experiments indicate that, practically, the action is complete at the end of an hour; accordingly the dough is allowed to stand for this time previous to the separation of the starch.

This separation is effected by kneading the dough by hand under a fine stream of water from a faucet or in a dish; the wash-water is passed through a fine linen cloth, which prevents the loss of loose gluten particles; the operation continues until the water ceases to be clouded by the separating starch. The ease and quickness of this part of the process depend altogether on the coherency of the gluten. The "gluten" is then freed as far as possible from water by pressure in the hand and weighed. The water contents of this "moist gluten" varies generally between 60 and 70 per cent.; but the difficulty in observing uniform conditions of pressure gives rise to inexactness and makes the determination of the "dry gluten" advisable, when possible. By reason of the hygroscopic nature of gluten the process of drying is quite difficult. Partially drying, pulverizing and then drying to constant weight which some recommend, can be accomplished without loss only by great caution. Allowing it to stand for five or six days in a steam oven completes the drying quite thoroughly, but the long period required is objectionable. Allowing it to remain over night in a steam oven and then heating it in an air bath at 110° or 120° C. for five or six hours give results closely agreeing with those obtained by the other methods, and are much easier and quicker.

The wash-water from the dough contains a considerable quantity of soluble albuminoid matter, so that the gluten does not contain all the albuminous matter of the flour; but,



on the other hand, it contains in the dry state a large amount of impurities, according to Richardson, about 25 per cent., and this ratio is quite constant. So that, practically, with good flour the quantity of crude gluten is about the same as that of the albuminoids estimated by the most exact chemical methods, rarely varying from it either way more than 1.5 per cent. Good flours should contain from 9 to 14 per cent., though a fair flour from the Pacific Coast may fall below 9 per cent. With poor flours the gluten may fall far below the amount of albuminoids, and their small value is shown by its not reaching the proper percentage. The physical qualities of the gluten are of value in determining the quality of flour. In the moist state it should be of a light yellow color, and in structure homogeneous, plastic, elastic and with a very considerable degree of consistency. Adulteration, molding or other changes, under which the quality of a flour deteriorates, will, whether quantity be affected or not, very markedly impair the above-mentioned qualities of the moist gluten, and consequently all differences, as well as those of quantity, must be considered in the final conclusions touching the relative values of different samples.

#### STEAM POWER IN FLOUR-MILLS.

It is not generally known that in the flour-mills which are operated by steam, and even where engines of the higher grade are used, there is a difference in the proportion of one to three in the economical performance of the engines alone, to say nothing about the efficiency of the boilers. Millers speak of the burning of so many pounds of coal per barrel of flour, which is an incorrect and unreliable method of expressing the efficiency of an engine, because one mill may require one-third more power than another. One engine or steam outfit may be said to use 24 pounds of coal to make a barrel of flour, and another one may be said to require 36 pounds. Being located in different mills, the steam-plant which requires 36 pounds of coal per barrel may, as a matter of fact, be more economical than the one which requires 24 pounds. It may be that the machinery of the latter mill runs with more friction and requires more power, or that there was more of it. Practical men know that there is a great difference in the amount of machinery used by various millers to do the same amount of work. The only correct way to estimate the efficiency of an engine is by determining the amount of steam which is required per horse-power, or, to express this properly, the amount of water which it is required to evaporate per indicated horse-power per hour. This determines the efficiency of the engine absolutely. When it is said that one engine requires the evaporation of 24 pounds of water per indicated horse-power, and that another requires 48, we then express the relative efficiency of the two engines. Then, again, it may be that in one boiler and its setting 16 pounds of water per pound of coal will be evaporated. Thus is shown the relative efficiency of the steaming apparatus of two mills perhaps. Again, in one of these mills, 100-horse-power may be required to manufacture into flour a certain quantity of wheat, and in another mill 120 horse-power will be required to do the same thing. Here

is given a basis for comparison which indicates a decided difference in the arrangement and adjustment of the machinery of the mill.

#### SUPREME COURT PATENT DECISIONS.

A person who subsequently discovers a new mode of carrying out a patented process is not entitled to use the process without the consent of the patentee.

When an invention is one of a primary character and the mechanical functions performed by the machines are as a whole entirely new, all subsequent machines which employ substantially the same means to accomplish the same results are infringements, although the subsequent machines may contain improvements in the separate mechanisms which go to make up the machine.

QUERY: Will Prognosticator Prime be a conspicuous personage, Magna Charta and all, at the Milwaukee convention of the National Association in June next? Will he make another "bad break" on his crop report this year?

California is smacking her lips over the prospect of a barley crop of 25,000,000 bushels and a wheat crop of 60,000,000 bushels in the season of 1889.

### SPECIAL NOTICES.

#### LIBERAL OFFER.

With a view of increasing our subscription list, we will send a copy of R. J. Abernathy's new book, "The True Short System" (Price \$2.00) and "The Milling World" for one year at the very low price of Two Dollars. Renewal will be treated same way. This offer will only continue for a limited time. Now is your chance. Send in your subscriptions at once.

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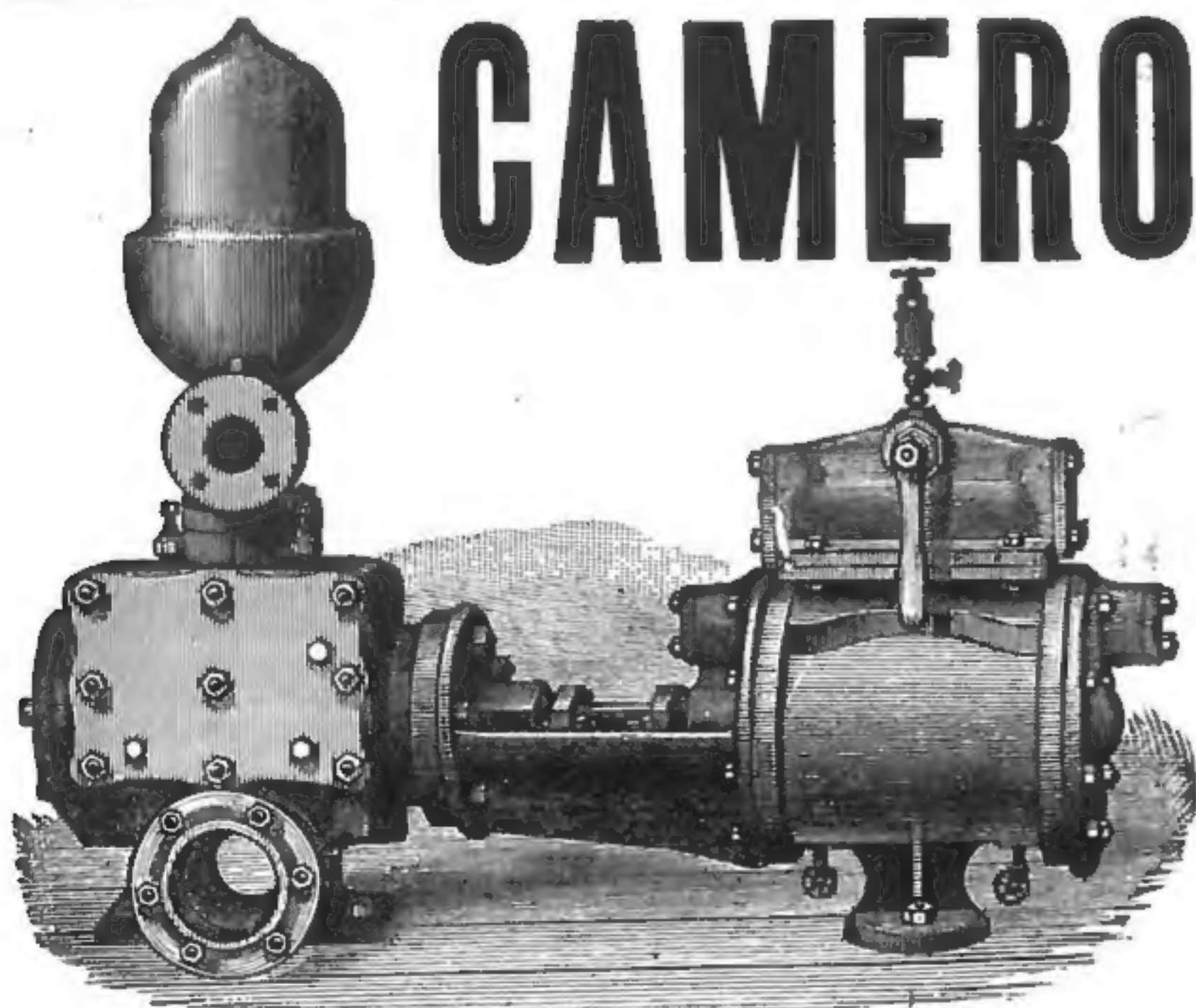
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## GENERAL NOTES.

FOLLOWING is a compilation showing the amount of money in circulation in the United States during the past eight years, the figures being from the official Treasury statistics:

	Mar. 1, 1881.	Mar. 1, 1885.	Feb. 1, 1889.
Gold coin.....	\$305,174,607	\$351,207,423	\$380,116,365
Silver dollars.....	29,120,545	40,686,187	58,574,861
Fractional silver.....	47,274,003	44,694,984	52,440,119
Gold certificates.....	6,229,300	112,683,290	130,986,592
Silver certificates.....	37,027,797	111,467,951	245,337,438
Legal tenders.....	324,474,415	207,754,194	303,319,518
Legal certificates.....	7,640,000	30,200,000	13,915,000
National bank notes...	339,890,023	314,886,770	229,089,957
Total.....	\$1,096,830,690	\$1,803,580,799	\$1,413,770,350

### COTEMPORARY COMMENT.

The editor of a milling paper who, in the face of the overwhelming practical proof of the success of short-system milling, seeks to make himself and his paper conspicuous by opposing it, can only be likened to an ambitious microbe essaying to reach the apex of a perpendicular pin.—*Kansas City "Modern Miller."*

Our Minneapolis cotemporary has been making an effort to prove that its wheat-gambling and flour-jobbing constituency has no use for a technical department in their pet paper. That's right. Leave the technical matter to those papers that are appreciated by the practical millers.—*Kansas City "Modern Miller."*

During the past few years there has been a decrease in the wheat area of the southern counties in Minnesota, Dakota and in Iowa, owing to the failure and other obstacles met with in these parts. This year the belief that the chinch-bug will be less hurtful has encouraged farmers to seed a larger area.—*Minneapolis "Market Record."*

Yet another victim. May wheat is a tragic deal. Col. Charles T. Hatch, a prominent railroad man of Minneapolis, shot himself in his office there. He is supposed to have lost heavily in bulling May wheat.—*Chicago "Daily Business."*

Recently Prof. Saunders of the Government experimental farm at Ottawa, Ontario, procured a number of specimens of Ladoga wheat and sent portions of each to the Board of Trade at Montreal, Quebec, Toronto, Ontario and Winnipeg, Manitoba, for classification. The Montreal Board of Trade reported that, with the exception of one sample it would "all grade as hard wheat." The Toronto Board referred the matter to a special committee, which declared that the whole of this very same wheat was of the soft

variety and worth from 11 to 12 cents per bushels less than red Fyfe. The Winnipeg Board pronounced the article to be graded with the "Northern" classes, and that the best sample was worth only 5 cents less than No. 1 Manitoba hard for milling purposes. Messrs. Ogilvie, of Montreal, and Gillet of Port Arthur, Ontario, grain inspectors, about agreed with the Montreal Board; they ranked all hard except the one ranked soft by the Montreal Board.—*Chicago "American Elevator & Grain Trade."*

### LARGE BREADSTUFF EXPORTATION.

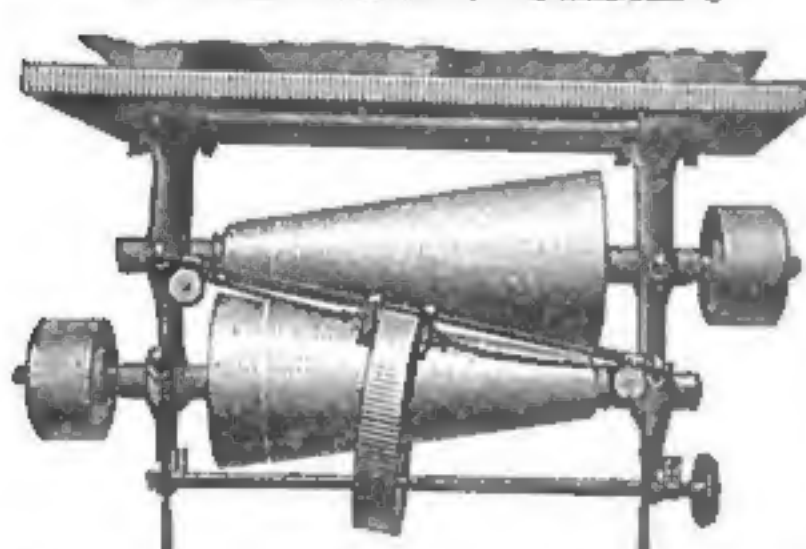
Notwithstanding the decrease in wheat grain and flour exportation, the breadstuff trade of the United States with other countries continues to be large. During the month of March, 1889, the total value of breadstuffs exported was \$9,636,482, against \$9,281,653 in March, 1888. For the three months ending March 31, 1889, the total value was \$28,763,471, against \$27,785,840 for the first three months of 1888. For the nine months ending March 31, 1889, the total was \$91,744,947, against \$101,995,977 for the same period a year ago. Even in wheat grain and flour the figures are important, although less than in former seasons of average crops. During March, 1889, the exports of wheat grain were 2,840,956 bushels, worth \$2,529,639, against 4,313,680 bushels, worth \$3,642,425 in March, 1888. For the nine months ending March 31, 1889, the total was 36,546,926 bushels, worth \$33,313,190, against 57,106,877 bushels, worth \$48,904,256 for the same period a year ago. In March, 1889, the wheat flour exports were 669,000 barrels, worth \$3,306,690, against 944,679 barrels, worth \$4,261,968 in March, 1888. For the nine months ending March 31, 1889, the total was 6,896,472 barrels, worth \$33,497,226, against 9,218,436 barrels, worth \$42,152,401 for the same months a year ago. The grain and flour exports in March, 1889, footed \$5,836,329, against \$7,904,393 in March, 1888.

In the minor lines there were some changes. The March, 1889, export of barley was only 26,584 bushels, against 130,651 bushels a year ago; corn 8,204,451 bushels, against 2,115,666; corn-meal 18,852 barrels, against 17,461; oats 27,890 bushels, against 21,819; oatmeal 777,569 pounds, against 83,434; rye 24,977 bushels, against 2,760. The corn exports in the nine months ending March 31, 1889, were 46,911,434 bushels, worth \$22,989,317, against 18,564,366 bushels, worth \$9,881,228 for the same period a year ago. On the whole, there is absolutely nothing in the situation that justifies discouragement. American cereals are holding their own, and something more, when the crop conditions of 1888 are taken into account. With a full wheat crop this year, we predict that, in April 1890, when publishing the export statistics, we shall be able to write the figures much larger than those written now, and in all probability much larger than they have been written for some years. American cereals are too excellent, too abundant and too cheap to be pushed out of the markets of Europe altogether.

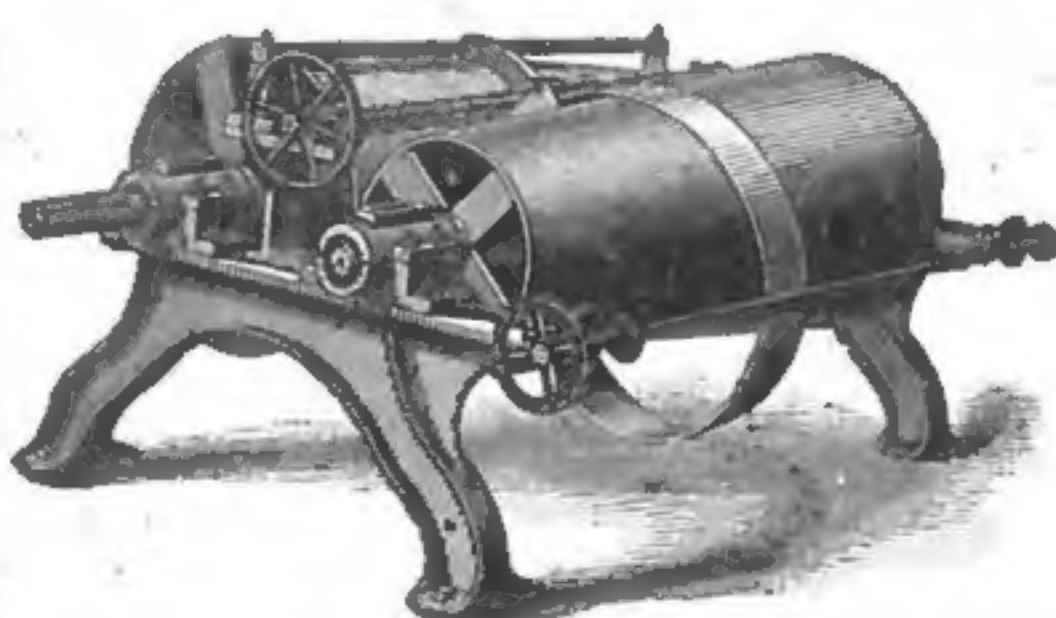
WHAT an outlook for the Millers' National Association! No one to love! None to caress! Roaming alone through the world's wilderness! Not a single reputable supporter among the milling journals! Sad is its lot! Joy is unknown! 'Tis the last rose of summer left blooming alone! Secretary Seamans should meet it at heaven's gate, sweet Belle Mahone!

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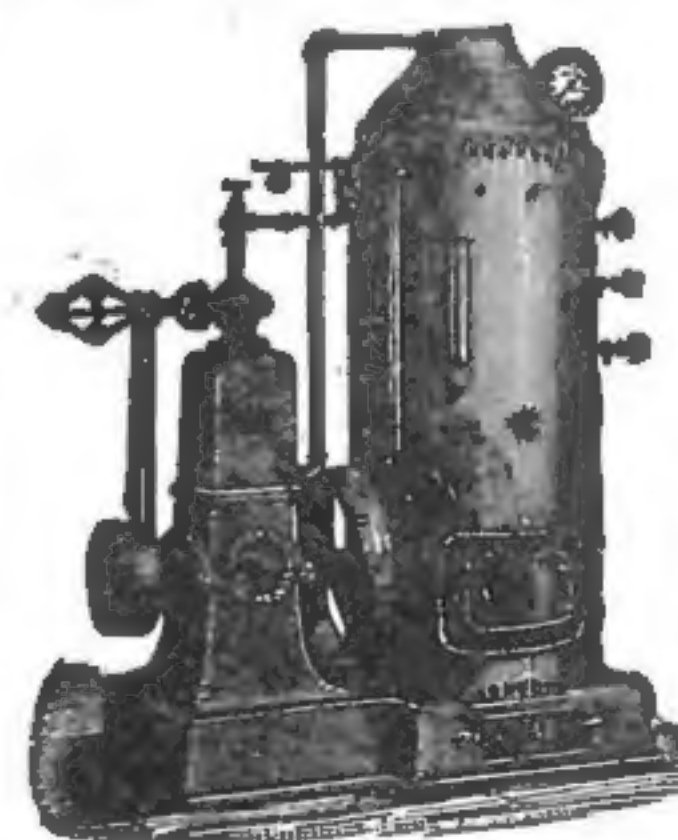


This cut represents a set of hanging cone pulleys. This pattern is intended for that class of machinery that stops and starts at the same speed, and at the same time be able to change the speed more or less while running. These cones are also fitted with a governor where a steadymotion is required and the initial power is



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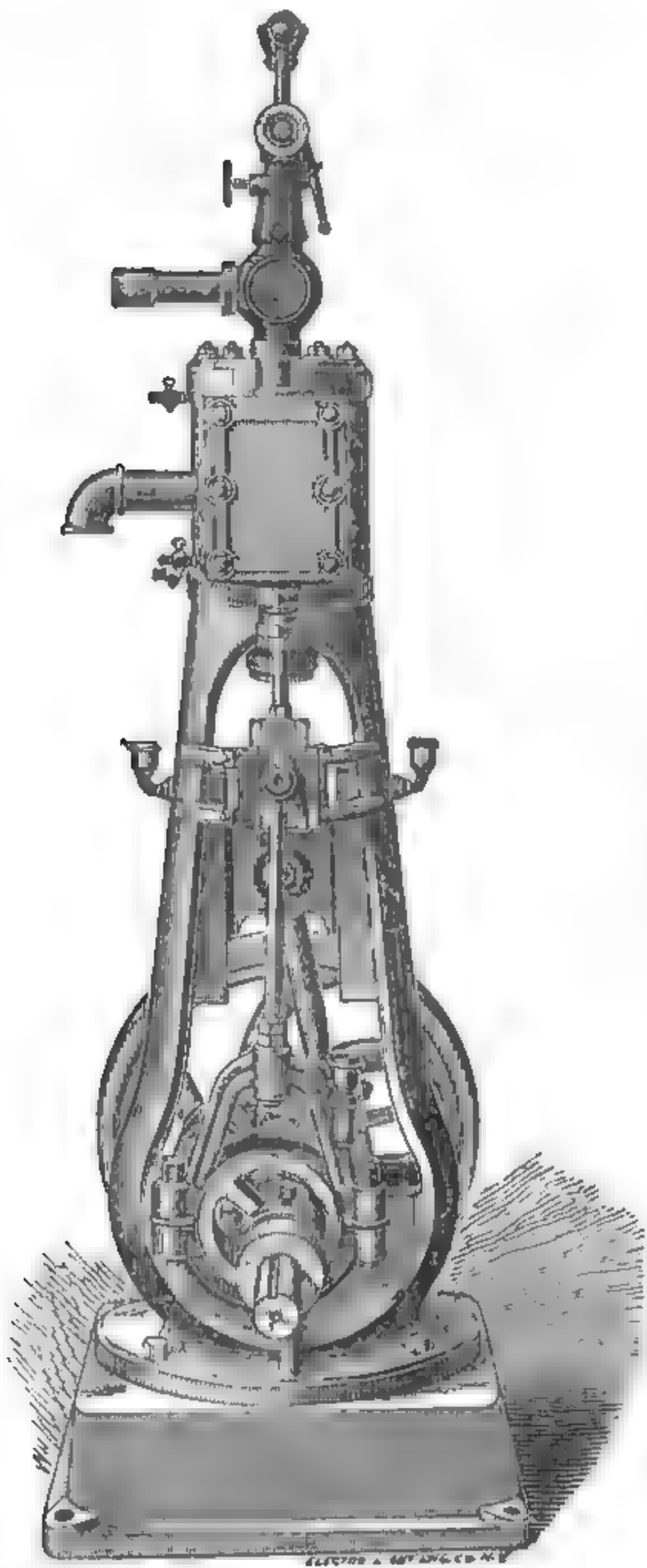
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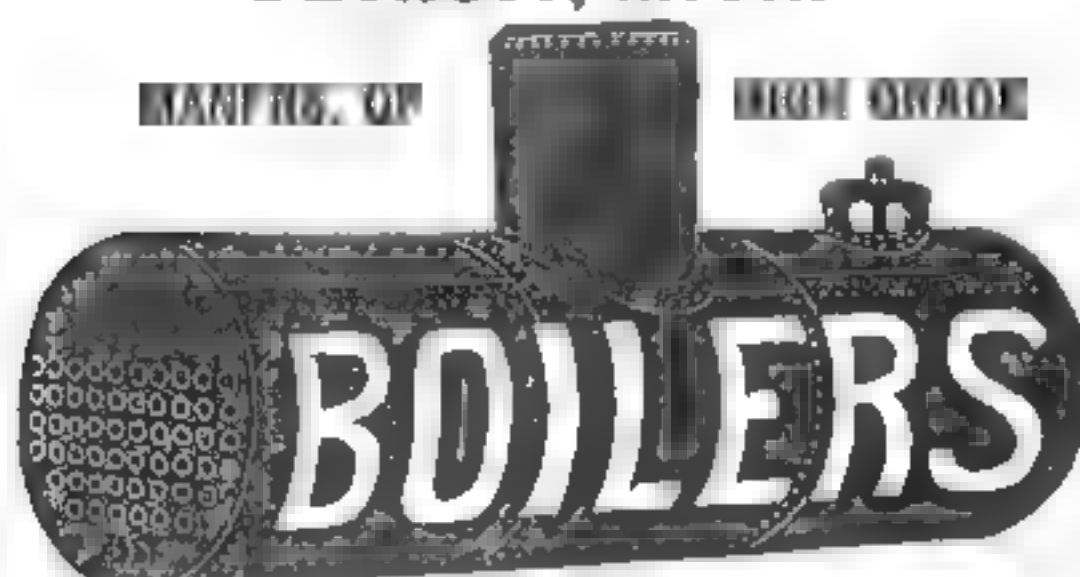
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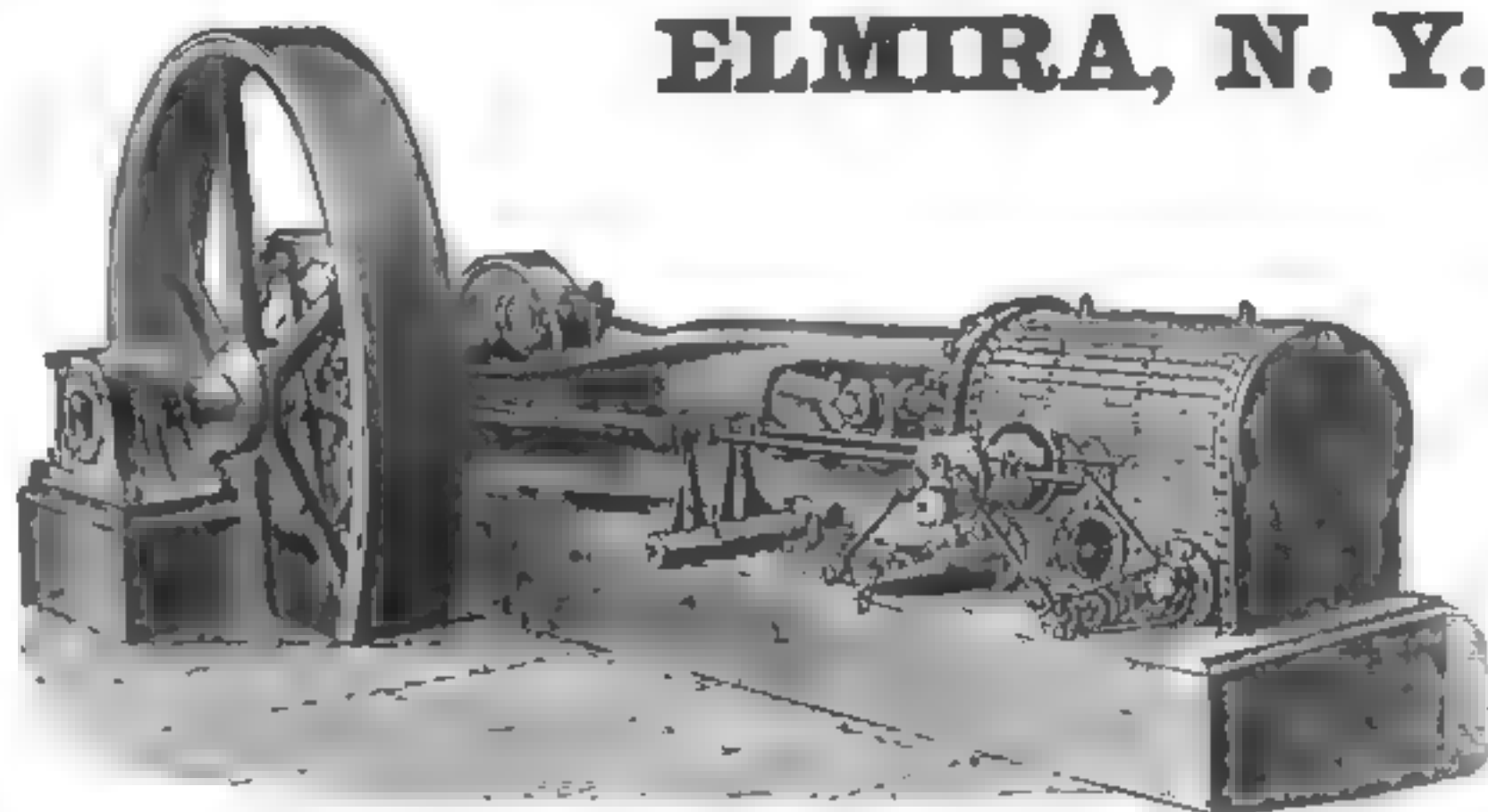
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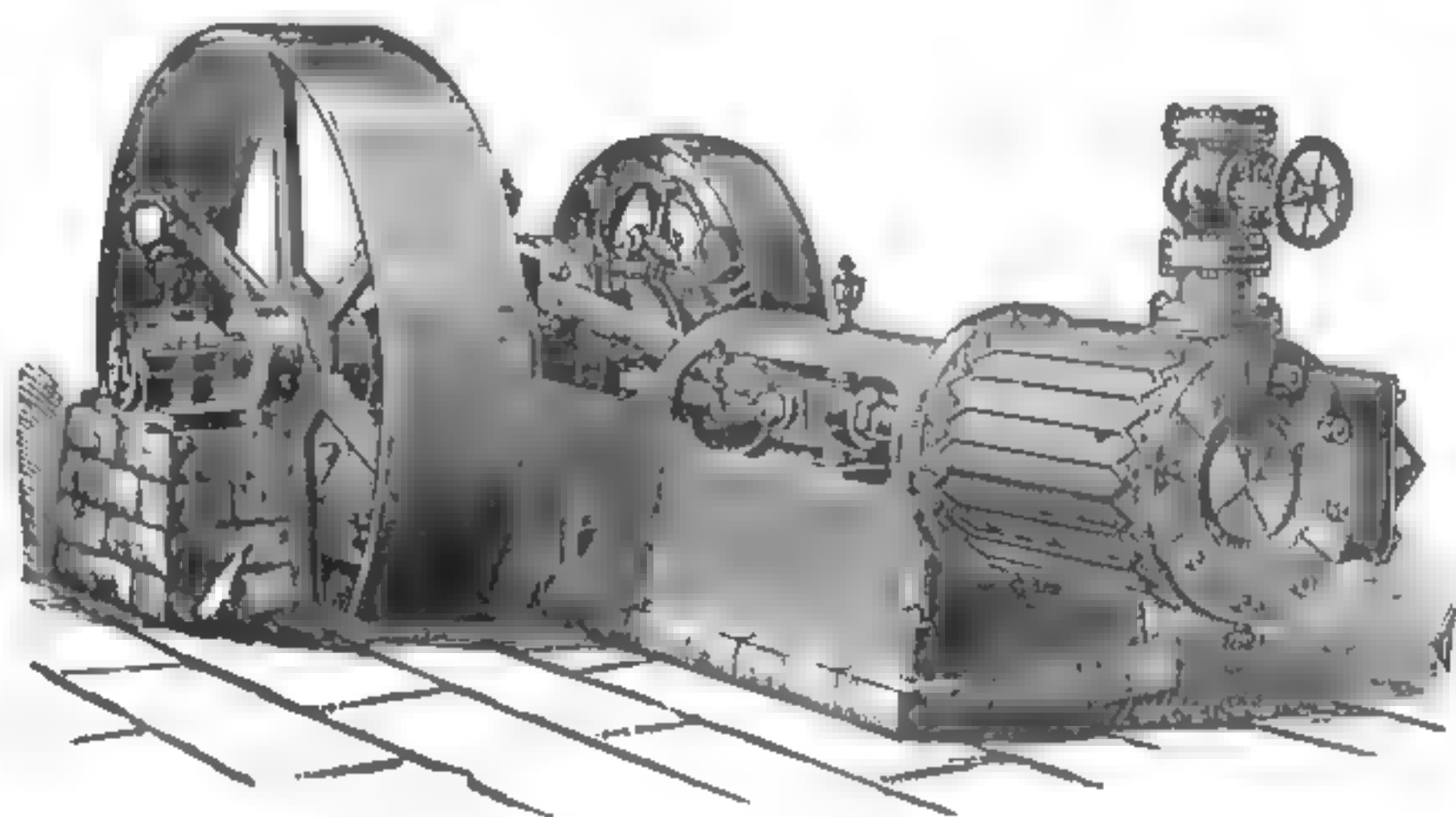
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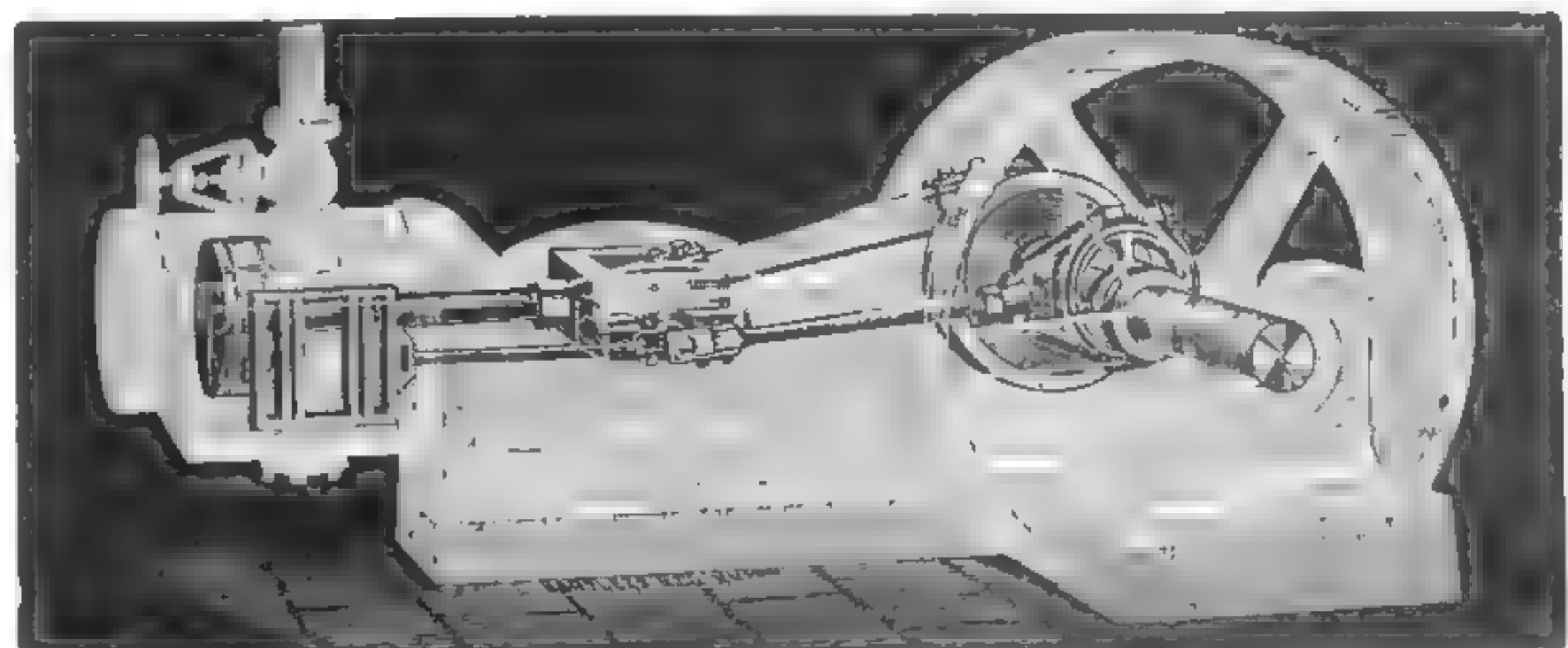
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Roanoke, Va., men project a new roller flour-mill.  
 Tucker & Tucker, Winona, Tex., build a grist-mill.  
 H. T. Evans, Summerville, Ga., builds a flour-mill.  
 W. M. Birely, Vanceburg, Ky., builds a roller mill.  
 Chas. B. Clark, miller, Woodstown, N. J., assigned.  
 F. M. Calvert, Owingsville, Ky., builds a flour-mill.  
 J. B. Lillie, Franklin, Tenn., builds a 300-barrel mill.  
 T. Samuel's mill, Monroe, Ore., burned; loss \$12,000.  
 Lyell & Cochran, Lytle, Tex., have started a corn-mill.  
 L. Duerer & Bro., Stanford, Ky., built a 50-barrel mill.  
 Blevins & Craven, Dardanelle, Ark., added a corn-mill.  
 Chapman & Johnson, Troy, Ala., will build a grist-mill.  
 D. Waugh, Wellsburgh, W. Va., improves his flour-mill.  
 W. H. Williams & Co., Sedgwick, Ark., start a corn-mill.  
 The Bridgewater, Va., Milling Co. start another corn-mill.  
 W. F. McCulley, Oxford, Ala., wants grist-mill machinery.  
 J. H. Maury's grist-mill, Cuthbert, Ga., burned; loss \$1,000.  
 Hill & McCurry, Durham, Ark., build a 50-barrel flour-mill.  
 J. B. Wilford & Bro., Oakland, Ky., have built a flour-mill.  
 F. L. Hering, Finksburg, Md., changes to short-system rolls.  
 Melton & Grayson's mill, Golden, N. C., burned; loss \$2,000.  
 Raht Bros., Tullahoma, Tenn., increase to 200-barrel capacity.  
 R. W. Waller & Co.'s grist-mill, near Nashville, Tenn., burned.  
 M. McDonald's flour-mill, New Albany, Ky., burned; loss \$6,000.  
 The Atlantic Coast Line, Petersburg, Va., build a grain elevator.  
 Wm. Oliphant, Miller, Swedesboro, N. J., sold to I. L. Davenport.  
 The Merritt Milling Co., Morristown, Tenn., build a 300-barrel mill.  
 R. O. Gathright & Co., Louisville, Ky., add new flouring machines.  
 D. A. Brooks, jr., & Co., Sturgis, Ky., build a 50,000-bushel elevator.  
 M. F. Lannott's flour-mill, Glen Falls, Md., burned; loss \$3,000; rebuilds.  
 Gilbert, Howells & Co., McKenzie, Tenn., are building a 50-barrel mill.  
 J. M. Wilford & Son, Mayfield, Ky., remodel to rolls with 150-barrel capacity.  
 B. T. & A. J. Gahagan, Stackhouse, N. C., are building a flour and feed mill.  
 The Alliance Roller Mill Co., Cisco, Tex., enlarge their mill and build an elevator.  
 John B. Gill, Ranger, Tex., wants machinery for a 50-barrel roller flouring-mill.  
 E. Allison's flour-mill, New Cumberland, W. Va., burned; loss \$10,000; insurance \$8,000.  
 Collins & Yager, Twyman's Mill, Va., want machinery for a new 500-bushel corn-mill.  
 A. B. Hamilton & Co., Point Pleasant, W. Va., have built a large roller flouring-mill.  
 H. Exall and others, Dallas, Texas, are building a \$175,000 elevator, to hold 1,000,000 bushels.  
 The warehouse of the Mandan, Dak., Roller Mills burned; loss \$30,000; insurance only \$15,000.  
 C. F. Gwinn and others, Huntington, W. Va., propose to build a 100-barrel roller flour-mill.  
 Lippitt, Chew & Washington, Harrisburg, Va., have bought and will improve the Form Mill.  
 Steel & Hart, Clarksburg, W. Va., have remodeled their mill to rolls with 100-barrel capacity.  
 J. Hurst & Co., Clarksville, Tenn., organize a \$50,000 stock company to build a flouring-mill and elevator.  
 Geo. B. Dewey and others, Covington, Ky., have incorporated the Central Elevator Co., capital stock \$25,000.  
 Messrs. Boals, Baptist and others, of Covington, Tenn., have formed a \$50,000 stock company to build a flour-mill at West Point, Miss.  
 H. A. McLeomore and others, Columbia, Tenn., have organized the Columbia Milling Co., capital stock \$25,000, to build a 250-barrel flour-mill.  
 President W. G. Avery, of the W. G. Avery Mfg. Co., Cleveland, O., has been notified by the commissioner of patents of Canada that a Canadian patent was issued to him April 2, 1889, covering elevator-buckets, both welded, braised and fused.  
 Says the Toronto, Ontario, *Monetary Times*: Once more the question of the equity of the relative duties on wheat and flour has been before the House. Mr. Mulock asked whether it was the intention of the Government to put an end to what he characterized as the "unjust discrimination complained of by the milling interest." Mr. Foster refused to answer, on the ground that he did not admit the existence of unjust discrimination. This is the first time the complaint has been met by an official denial of the existence of the grievance. Up to the present the millers have been able to say that the Government did not deny that discrimination existed. Nor have the millers so far produced any evidence, but only statements, which it now appears the Government does not accept as decisive, of the facts. The only evidence given has been presented by this journal. It was collected at Minneapolis and certainly went to show that there is discrimination. It may be that the Government has

been getting evidence on the point. The millers ought to go to work like business men and back up their statements by proof, if, as we think it is, proof be attainable.

There has been an excess of rainfall during the past two weeks over the greater portion of the Missouri and upper Mississippi valleys, including the states of Kansas, Nebraska, Idaho, Colorado and portions of Missouri, Illinois, Wisconsin, Minnesota and Dakota. The rainfall has been heavy in these sections, which include a large area of the spring and winter wheat regions, where moisture was much needed. Well distributed rain also occurred over the states of the Ohio Valley, Tennessee, Arkansas, Pennsylvania, Virginia and Michigan, which will greatly improve the crop condition in those sections. There was a general absence of rain in the south Atlantic and southern portion of the Gulf states. Light showers occurred in New England and middle Atlantic states, and reports indicate that about one-half an inch of rain fell during the week over Oregon, Washington Territory, Northern and Central California, and one-fourth of an inch in Southern California.

Says Chicago *Daily Business*: George R. Hurd & Son, grain dealers of Monroe, Mich., send *Daily Business* a sample of hard spring wheat raised near that place last year. Messrs. Hurd & Son write: "The seed was brought here last spring, 1888, and sown. The name the wheat was known here by was fancy Minnesota hard spring wheat. Last year it was not sown until May, and then it did not come up for 15 days because the ground was so dry, yet it produced over 20 bushels per acre and was harvested in ten days after the winter wheat here. This year there are sown over 200 acres of this wheat, and at this writing much of it is up from one to two inches high, and it looks very promising for a good crop so far. The winter wheat stands remarkably well all over the ground where sown, and the prospects so far are good for a crop. We have had plenty of rain in April and every thing is pushing out very fast."

A dispatch from St. Louis, Mo., April 13, stated that John Jackson, president of the St. Louis Elevator Company, had committed suicide by hanging himself to a post with a clothesline in his private office. Mr. Jackson stood on a chair, put the noose around his neck and then kicked the chair from under him. He wrote letters in his office until nearly midnight and had the porter mail them for him at the nearest box. The porter did not suspect any thing wrong, not even when Mr. Jackson asked for a quilt and said that as it was so late he would stay there all night. The quilt was found in the morning on the back of a chair, where the porter had placed it. The night watchman saw a light in the office at 12.30, but at 2 o'clock it had been put out. Mr. Jackson, in his letters, gave specific instructions as to what he wished done in the various enterprises he was interested in. Mr. Jackson had worried a great deal lately over some losses of the Elevator Company in the decline of May wheat. D. P. Grier, of the Grier Commission Company, through whom the St. Louis Elevator Company did its buying, said Mr. Jackson personally was not long a bushel with his house, but the Elevator Company was. He believed the Company was able to take care of all its deals. However, it has been noted for several days that Mr. Jackson was worried and some of his friends knew that he was in trouble, but when approached on the subject he laughed the matter off and assumed a gay and cheerful manner. An intimate friend of the dead man said: "I know that this catastrophe was by no means unexpected in the family of Mr. Jackson, although of course the shock is terrible. For about two weeks she has been in very low spirits because of heavy financial losses."

#### PERSONAL MENTION.

Mr. J. Murray Case, of Columbus, O., is now in Europe. The London *Miller* of April 1 announces his arrival in the following words: On Tuesday last we had the pleasure of a visit from the well-known American mill engineer, Mr. J. M. Case, of Columbus, Ohio. Mr. Case arrived in Liverpool by the s. s. Umbria on Sunday, the 24th ult., after a stormy passage across the Atlantic.

#### DANCING AT EIGHTY-FIVE.

The island of Nantucket is off the track of the modern world. The people and their customs are very unlike those in any other part of the world—the "off-island part," as the Nantucketers are wont to call it.

They know but little about the new-fangled manners and methods of modern social life. They follow the beaten path of a century ago, live simple, thrifty, laborious lives, and furnish little business for the doctors.

A visitor at an evening gathering on the island, not long since, tells how one lady, aged ninety-one, presided at the piano, and another aged eighty-five, danced. "And you may take my word for it," adds the visitor, "that the dancing was sure-enough dancing, if one might judge from the lady's snapping eyes, nervous speech and decisive character."

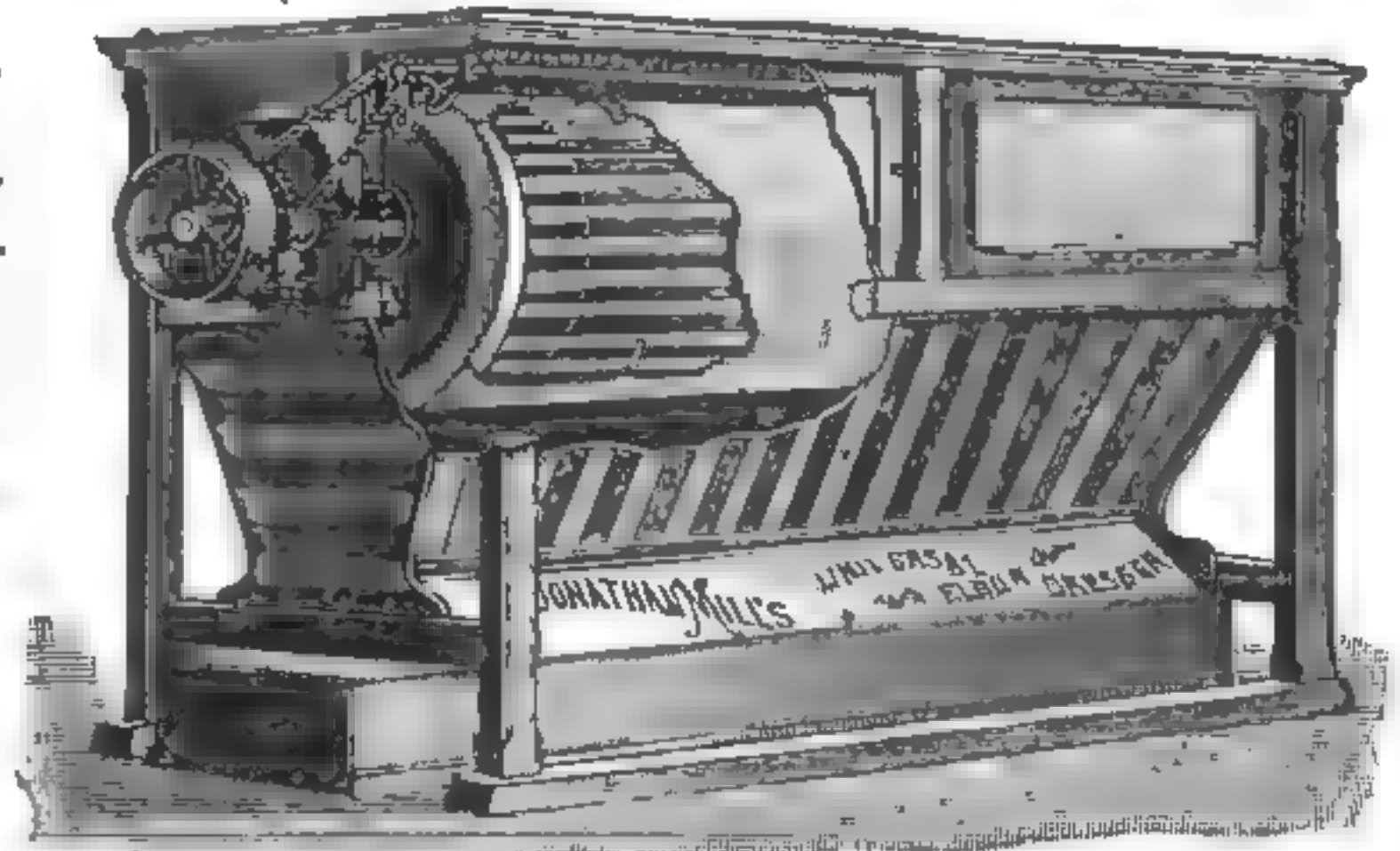
Locality and climate would seem to have comparatively little effect on health and longevity if people lived simply, as nature dictates, and when ailing built up with nature's simple remedies, like Warner's Log Cabin Sarsaparilla, instead of pulling down the system by using poisonous mineral drugs.

People who hasten to the physician every time they have a headache, or experience any of the minor evidence of nature's sure revolt against disobedience of her laws, will not be found dancing at eight-five. The mineral poisons of the apothecary lead to early physical decay.

The long-lived, rugged Nantucketers, who enjoy life's pleasures when octogenarians illustrate what the "off-island" portion of the world may experience if they live by nature's law and use old fashioned log-cabin remedies of root and herbs for the ordinary ills that flesh is heir to.



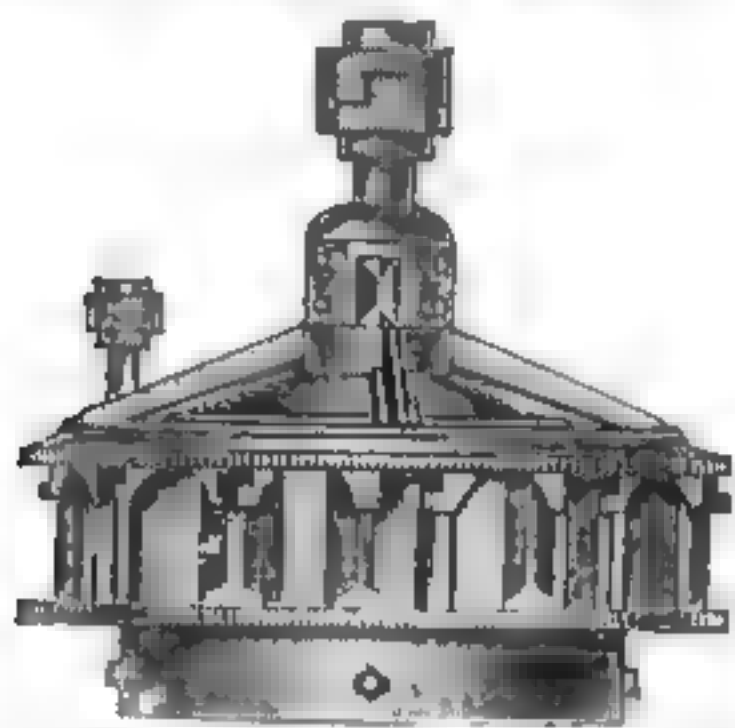
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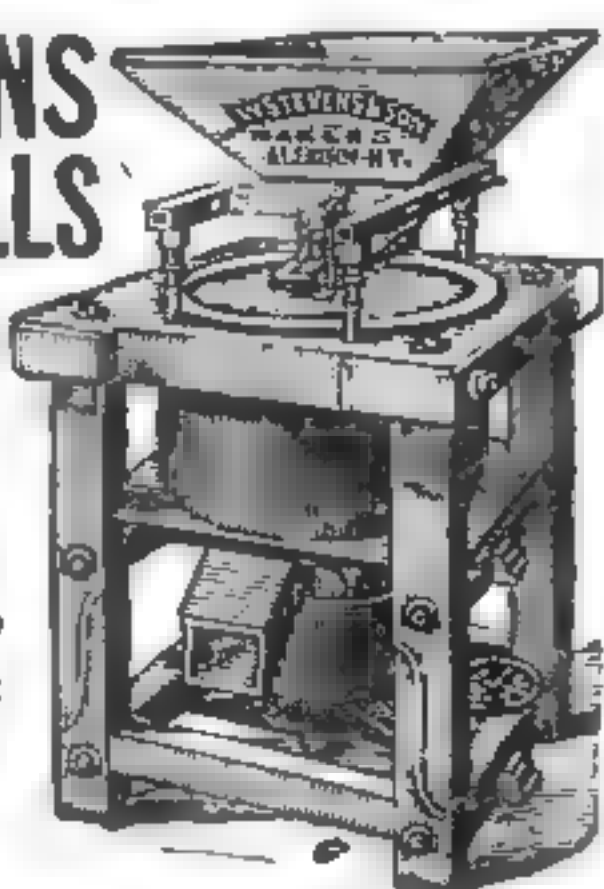
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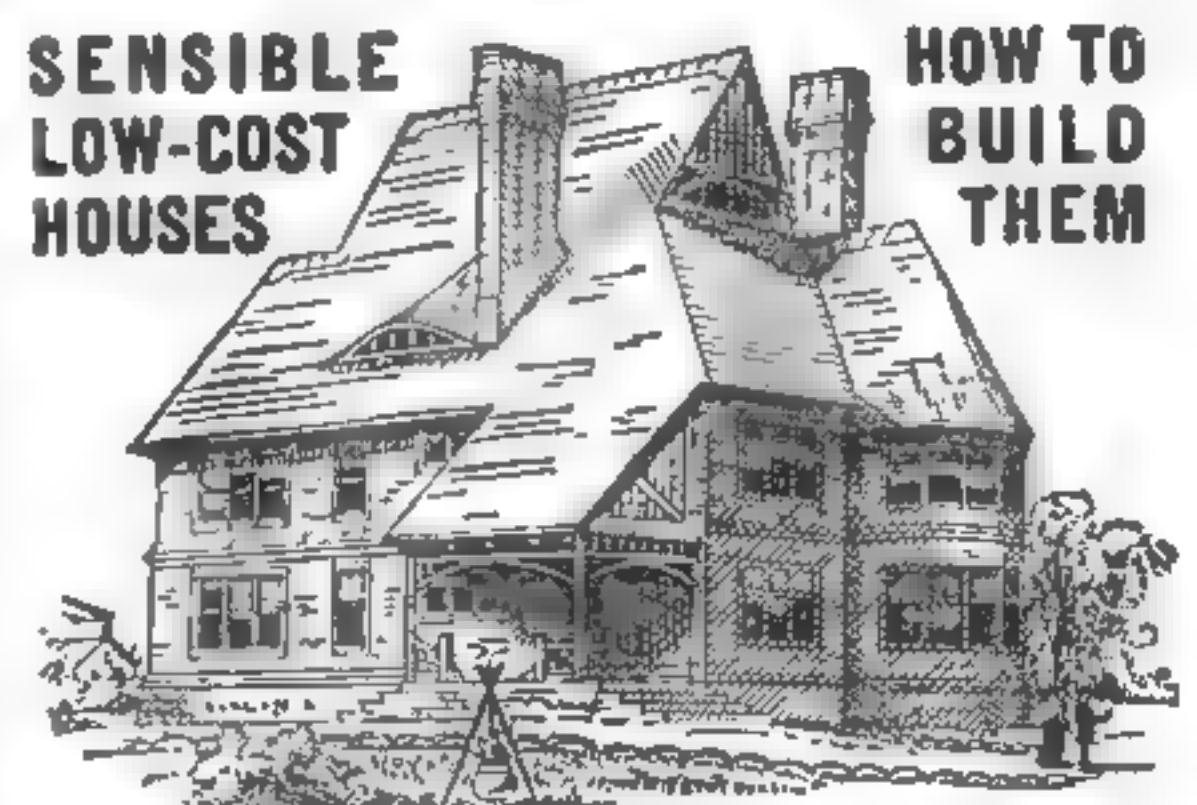
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## EUROPEAN ECHOES.

THE National Association of German Millers will hold its annual convention in Berlin from May 26 to May 29.

DISASTROUS floods have greatly damaged the German mills situated in the river valleys, and still worse floods are feared.

It is said that at the instance of the federated societies of Belgium a bill placing a heavy import duty on wheat, barley, oats, rice and other grains will shortly be introduced into the Belgian House of Deputies.

THE flour-mills in Australia are generally worked 24 hours per day during six months in the year, and 12 hours per day during the other six months. The wages of a foreman miller are set down at \$14.40 per week; stoneman \$14.40; engine-driver \$12; office-clerk \$7.20 per week. Constant employment, however, is uncertain.

DURING the first two months of this year France imported 3,789,726 kilos (the kilo is equal to 2½ pounds) of bread, compared with 597,567 kilos and 140,990 kilos brought over the frontiers during the same period of 1888 and 1887 respectively. This startling increase is due to the law of March, 1887, which placed a duty of 5 francs on each imported 100 kilos of wheat and 8 francs on the same weight of flour, while bread was left under the old tariff of 1 franc 20 cents per 100 kilos.

ACCORDING to our French cotemporary, "Le Meunier," protection in France has given none of the good results which were promised when the Chamber was induced to vote the heavy duties now laid on the importation of wheat and some other kinds of grain. The raisers of agricultural produce have not in the main got any better prices, while they still continue in the rut of old-time farming from which it was desired to extricate them. The only tangible result of protection so far has been a rise in the price of bread.

SAYS the London "Miller": It is for the English reader somewhat curious to learn that the French Minister of Commerce has forwarded to the Paris Chamber of Grain, Flour, Seeds and Oils samples of American flour, "which are," he understands, "of high baking value." The Chamber promptly sent on the samples to the "Twelve Marks" laboratory, that their value might be accurately determined. In this country we have long known that some American flours have excellent baking qualities. But for good or ill, British ministers do not take much interest in such questions.

It would appear that in some parts of Germany the baking trade is much harassed in a petty way by police regulations of one kind or another. A considerable latitude is still allowed to the police in the shape of municipal and local regulations, and such regulations are always severely enforced. In this connection an amusing story is told of a citizen of Frankfort, who one day took a walk into the country with his dog. The animal bore the muzzle prescribed by the town police authorities, but the pedestrian prolonging his walk into the jurisdiction of a neighboring municipality, the muzzle was seized as "an instrument of animal torture." And on returning home his dog was also seized for being without a regulation muzzle.

SAYS the London "Millers' Gazette": In the 12 months ended June 30, 1880, the United States exported 19,156,000 quarters of wheat, the largest quantity recorded, and 6,011,419 barrels of flour. In the 12 months ended June 30, 1888, the exports of wheat had decreased 57 per cent., being only 8,223,000 quarters; those of flour were nearly doubled, being 11,963,574 barrels. Thus the American millers' boast of 10 years ago, that it was the ambition and mission of the merchant mills of America to send England flour instead of wheat, was not entirely an idle one. In fact, although the

exports of wheat and flour combined fell off from 22,538,000 quarters in 1879-80 to 14,953,000 quarters in 1887-88, or a decrease of 33 per cent., yet, taking flour alone, the exports were practically doubled in these eight years.


SAYS the London "Mark Lane Express": It is worth bearing in mind that the amount of smut could be very greatly reduced if the crop from which the seed is to be taken was hand-picked as soon as the ears were visible. This would, of course, not be practical on a large scale, but for a small crop of some special seed it would be quite feasible. Lastly, one very important consideration remains to be mentioned, namely, the quality of the wheat itself produced from copper-dressed and warm-water-dressed seed respectively. Mr. Jensen submitted twelve samples of wheat grown from seed dressed in these two ways to the director of the United Steam Mills in Copenhagen. He reported strongly in favor of the water-dressed samples; they were by far the best, only one sample of the copper-dressed wheat coming up to them in quality.

SAYS the London "Miller": If proof were wanted of the futility of arguing that import dues are paid by the foreign producer and not by the home consumer, it would be afforded by the outcry that is being raised in many parts of Germany against the regulation permitting the free entry of parcels of bread and flour not exceeding three kilos of 2½ pounds. The German bakers complain that such of the poorer classes as are within walking distance of any foreign frontier will walk miles to supply themselves with cheap bread and flour, and they loudly demand the restriction of this liberty. Hitherto the authorities have not acceded to these petitions, as the concession in question was made in the interests of the thousands of working men who are forced to cross and re-cross the frontiers to get employment, and who would deeply resent paying duty on a piece of bread weighing perhaps six ounces.

THE city of Warsaw, in Russian Poland, has lately been thrown into consternation by a case of attempted wholesale poisoning. A master baker in the city sent out a batch of bread which caused the severe illness of upwards of 130 people. Fortunately no one died, but an examination proved that grains of arsenic had been baked in the said batch of loaves, and although the innocence of the baker was established, it was proved that an assistant, whom he had lately dismissed, had managed to steal into the bakehouse while the master's back was turned and mix arsenic with the dough, thinking no doubt that suspicion could only fall on his late employer. The author of this diabolical attempt had two accomplices, one of whom was his own father. The most astonishing part of this story is the leniency with which the culprits were treated, the court awarding them only three and a half years' imprisonment each.

SAYS the London "Miller" of April 1: Fresh financial troubles abroad and mistrust at home have made the corn trade of the past week very unsettled, a state in which value has suffered. Depression in opinion, as in actual business, is extending, and the strongest holders of stocks appear powerless to stem the inexplicable constraint of trade. The resumption of navigation is daily becoming more complete, but the exchange value of the rouble in Russia is stiff at its advanced quotations, and although reduced rates are accepted for freights it is difficult for business to be done by merchants here with those of Southeastern Europe. It is believed the winter season has done serious damage to the winter wheat crops of Southern Russia, and this belief should soon be confirmed or dispelled. The wheat plant of the Azof districts affords a sure sign of its condition early in spring. At home English wheat-fields have often a temporary yellow and sickly hue, which they may outgrow; but the color, brown and blighted, which marks the Russian crops is accepted as a sign that the crop will not recover so as to give an average yield.





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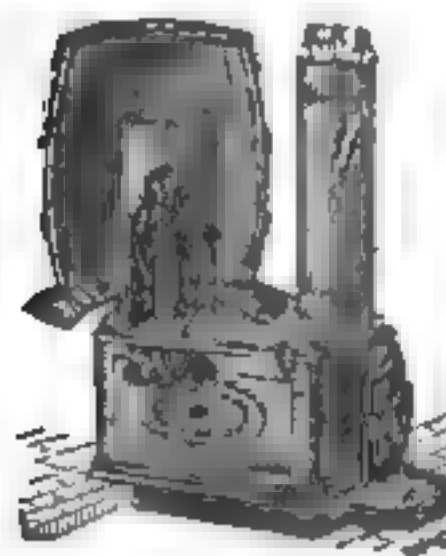
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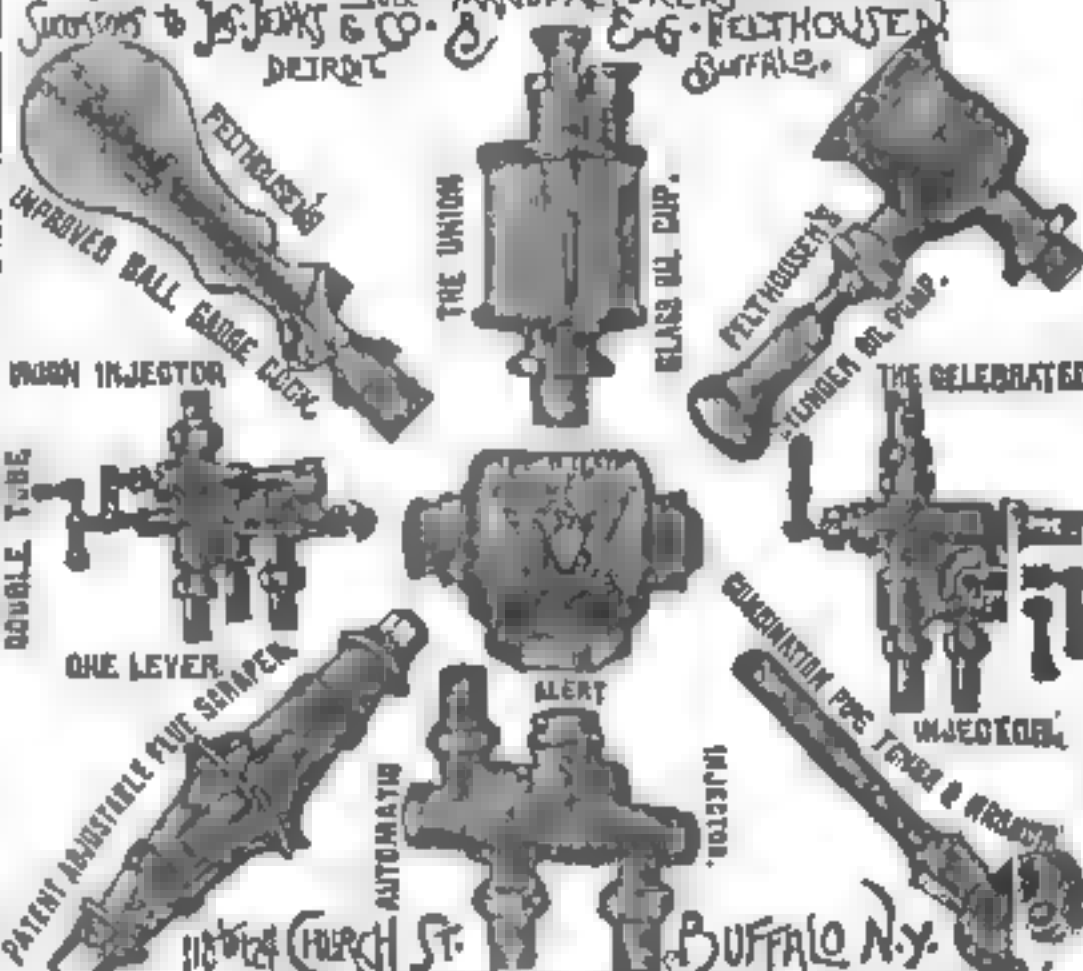


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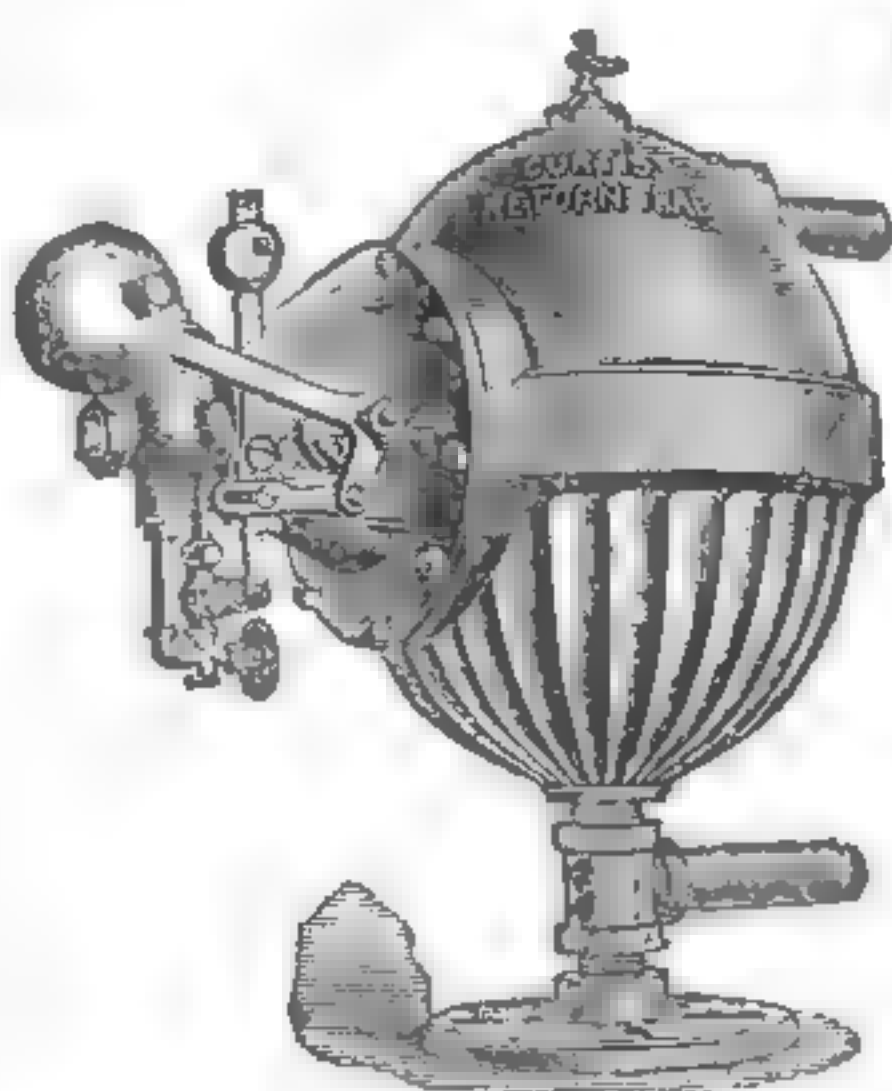
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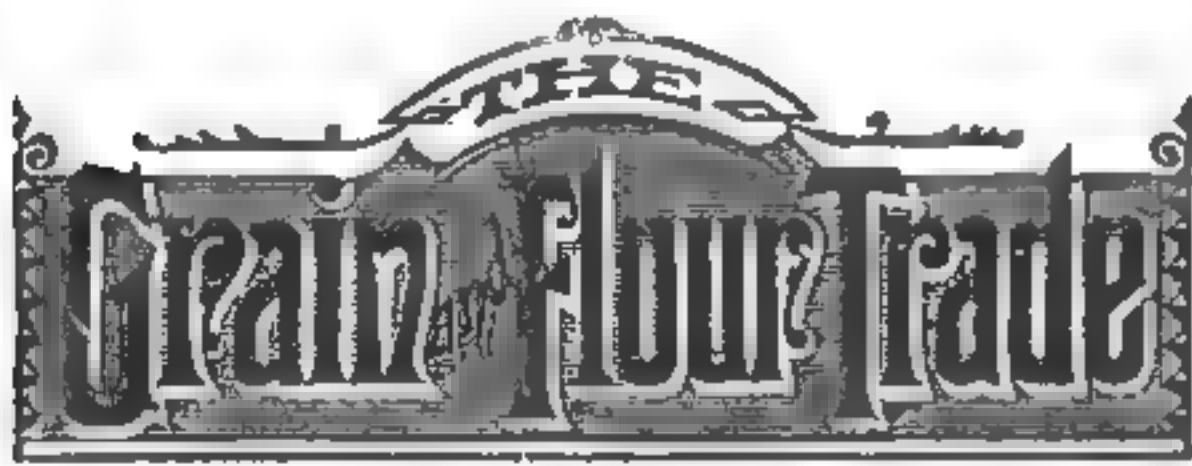
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OFFICE OF THE MILLING WORLD,  
BUFFALO, N. Y., April 20, 1889.

On Friday of last week wheat-selling and rains in the Northwest and lower cables dragged the markets down. April wheat opened in New York at 85½c. and closed at 84½c. Options 5,100,000 bushels. April corn closed at 42¼c. and oats at 30½c. Wheat flour was dull, easy and neglected, the break in wheat again driving off the buyers. The other lines were quiet.

On Saturday wheat rallied to 85½c. for April at closing, on reports of serious damage to crops in Russia. Options 5,440,000 bushels. April corn closed at 42½c. and oats at 30c. Wheat flour was neglected and nominally unchanged. The minor lines were featureless.

On Monday the markets were somewhat stronger and more active on better speculative feeling. April wheat opened at 85½c. in New York and closed at 86½c. Options 16,560,000 bushels. April corn closed at 42¾c. and oats at 30½c. Wheat flour was a trifle stronger with wheat. Trade was moderate. The visible supply in the United States and Canada was:

	1889.	1888.	1887.
April 13.	April 14.	April 16.	
Wheat.....	27,778,722	32,979,657	50,613,183
Corn.....	16,245,187	8,323,546	20,032,093
Oats.....	6,858,290	3,457,989	4,279,775
Rye.....	1,548,958	323,880	358,898
Barley.....	1,052,713	1,546,873	792,044

In order to show what more than doubtful instrumentalities the gamblers will use in manipulating the markets, the following report of the Chicago corn and wheat markets is reprinted from the Reuter's Telegram Co.'s cable report on American commercial markets furnished to the press of Great Britain:

CHICAGO, WEDNESDAY, APRIL 3.  
WHEAT.

Opened with a weaker tone at a fall of ½c. and further gave way immediately, early business being transacted in May at 99 and 99½c. The market continued depressed until near the close, when it suddenly advanced owing to reports that several loads had been taken for export, and the close is steady at the advance.

	April.	May.	June.	July.
This day.....	....	1.05½	1.02¾	86¾
Previous day..	....	1.00	95½	86¾

#### CORN.

Was slightly firmer at the commencement, with values ½c. up, and afterwards a further advance ensued, which was mainly in unison with wheat, and the close is steady and unchanged to ¼c. dearer."

The actual course of the market was as follows:

	Wheat.	Opening.	Highest.	Lowest.	Closing.
May....	99½	99½	95½	95½	
June....	94½	94½	92	92½	

The prices of May and June options of wheat were thus quoted throughout Great Britain in the public prints as closing at an advance of 5½c. and 7½c. respectively, instead of a decline of 4½c. and 2½c. and the remarks preceding these quotations were so framed as to emphasize the wrong quotations. On the day when these erroneous prices appeared in the newspapers, the wheat market in Liverpool advanced and the Liverpool *Daily Post* reported as follows: "Owing to the better American advices holders of wheat have shown more firmness to-day and generally ask ½d. to 1d. per cental over Thursday's prices."

This misrepresentation looks like desperately bad tactics, and the members of the trade will probably inquire why Reuter's Telegram Co., which now has a monopoly of the supply of cablegrams to the British press, should go out of its way to falsify market reports in so outrageous a manner.

On Tuesday, in consequence of fine weather in the Northwest, an unexpected large increase in the amount on passage, lower cables and lessened export demand, the markets were lower. April wheat closed at 85½c. Options 7,240,000 bushels. April corn closed at 42¾c. and oats at 31c. Wheat flour was dull and neglected.

On Wednesday the markets were again duller and weaker after a good opening on export demand. April wheat closed at 85½c. Options 2,600,000 bushels. April corn closed at 43c. and oats at 30½c. Wheat flour was featureless, inactive and unchanged. Sellers named their own prices in cases where sales were made. The minor lines were featureless.

Following are the flour quotations:

SPRING FLOUR.		
	Sacks.	Barrels.
No grade.....	\$1.55@1.80	\$....@....
Fine.....	1.90@2.15	2.15@2.45
Superfine .....	2.25@2.60	2.85@2.90
Extra No. 2.....	2.80@3.00	2.90@3.05
Extra No. 1.....	3.20@3.60	3.30@3.70
Clear .....	3.40@4.20	3.85@4.15
Straight .....	4.60@5.10	5.10@5.25
Patent .....	5.20@5.90	5.70@6.40

WINTER FLOUR.		
	Sacks.	Barrels.
No grade.....	\$1.90@2.00	\$....@....
Fine.....	2.25@2.50	2.45@2.65
Superfine .....	2.65@3.00	2.90@3.25
Extra No. 2.....	3.15@3.40	3.40@3.50
Extra No. 1.....	3.40@4.40	4.65@5.15
Clear .....	3.85@4.25	4.15@4.55
Straight .....	4.65@4.85	4.65@5.10
Patent .....	4.80@5.15	4.95@5.50

CITY MILLS.		
W. I grades.....	\$4.40@4.55	
Low grades.....	2.30@2.65	
Patents.....	5.40@6.40	

On Thursday the markets were again extremely dull. April wheat closed at 85c. Options 2,500,000 bushels. Sales for local trade and export were small. April corn closed at 43½c. and oats at 30½c. Barley was in small demand at 67@74c. for the range of Canada. Malt was dull and nominal at 85@90c. for 2-rowed State, 85@95c. for 6-rowed State, and 95c. @ \$1.05 for Canada. Buckwheat grain was quoted at 51@52c.

Wheat flour was quiet. Shippers bought with reserve. Prices were unchanged, but the tendency was towards weakness all along the line. The total sales in New York were only 18,000 barrels, of which 6,000 were for export.

Rye flour was steady and quiet at \$2.75@3.00. Corn-meal was steady at \$2.50@2.85 for yellow Western and \$2.85 for Brandywine in barrels. Mill-feed was quoted at 60@65c. for 40-lb.; 60c. for 60-lb.; 65c. for 80-lb.; 70@80c. for 100-lb.; 80@85c. for sharps, and 75@80c. for rye feed.

#### BUFFALO MARKETS

WHEAT—It was Good Friday and most of the rooms were closed and nothing in the way of sales were reported in either spring or winter. CORN—in good demand and market steady to firm; sales included 10,000 bu No. 3 yellow, in store, at 38½c, 15,000 bu do do to arrive in store at 38½c, and 2,500 bu No. 2 spot at 38c in store. OATS—Quiet and weak; sales 1 earload No. 3 white at 30½c, 1 do No. 2 mixed at 28c, and 1 do No. 2 white at 32½c. BARLEY—Nominally unchanged. No. 3 Western at 58c on track; No. 1 Canadian quoted at 70c; No. 2 66@68c; No. 3 extra 62@63c. RYE—No. 2 dull at 50@50½c on track. CANAL FREIGHTS—The rates as reported are 4c on wheat, 3½c on corn, and 2½c on oats to New York. FLOUR—City ground—Patent spring, \$6.75@7.00; straight Duluth spring, \$6.25@6.50; bakers spring, best \$5.75@6.00; do rye mixture, \$5.00@5.25; patent winter, \$6.75@7.00; straight winter \$5.25@5.50; clear winter, \$5.00@5.25; cracker, \$5.00@5.25; graham, \$5.00@5.25; low grade, \$3.00@4.00; rye, \$3.25@3.50 per bbl; buckwheat, \$2.50 per cwt. OATMEAL—Akron, \$3.00; Western \$5.75 per bbl; rolled oats, in cases, 72bs, \$3.25. CORN-MEAL—Coarse, 80c; fine, granulated, \$1.50 per cwt.

A phenomenon that has not yet been satisfactorily explained was witnessed on April 2 at

Aitken, Minnesota. Shortly before five o'clock in the afternoon it became so dark that lights were necessary in business houses, and the air was filled with snow that was as black and dirty as though it had been trampled into the earth. Six ounces of snow and ¼ ounce of dirt and sand were found in the bottom of a dish. The dirt is very fine, something like emery, and contains particles that have a metallic luster. This dirty snow fell to the depth of a half inch. The atmosphere at the time presented a peculiar greenish tinge. There was a little wind blowing at the time from the northwest, though there seemed to be considerable wind higher in the air. Solid chunks of ice and sand are reported to have been picked up in various places.

Recently a wagon passed through Kansas City, Mo., which bore, in big black letters on its canvas covering, the following legend:

Chinz-Buged in Illinois, Sicloned in Newbraska, White-Capped in Indiana, Bald-Knobbed in Missouri, Prohibited in Kansas.

OKLAHOMY OR BUST.

#### MEDICAL MONOPOLY NOT WANTED.

Boston Daily Globe, Feb. 7th, '89.

In the Legislature of Massachusetts a bill is now pending whose object is to prohibit, under penalty of fine and imprisonment, the practice of "medicine, surgery or midwifery" by any other than the "regular" physicians. The attempt to pass such a bill has been made before, but it failed. It is a measure which ought not to pass, because it invades the personal liberty of the citizen; not the personal liberty of the "irregular" physician only, but of the patient.

Only yesterday Dr. Holt, in a paper read before the Massachusetts Medico-Legal Society, an organization of "regular" physicians, complained of the ignorance of his professional brethren as shown in the notorious Robinson poisoning cases.

"This crime," said the doctor, "one of the greatest in our medical history, would never have been discovered but for the suspicions aroused outside the profession." And he called attention to the fact that in five of the poisoning cases the regular physician certified the cause of the death to be pneumonia, typhoid fever, meningitis, bowel disease and Bright's disease respectively.

This shows how far the "regular" physicians are from being infallible.

It would seem to be more in accordance with justice and common sense where they to perfect their own knowledge before they appeal to law to prohibit others from healing.

Not long ago a *Globe* reporter called upon ten "regular" physicians on the same day, and described his symptoms in exactly the same language to each. The ten physicians informed him that he was suffering from ten different diseases and gave him ten different prescriptions, each utterly inconsistent with the others.

When Garfield was shot five of the most famous regular physicians in the country spent three months probing for the bullet in the region of his left hip, and after his death it was found under his right shoulder-blade. We have but a word to add, which is that the above is the doctrine Messrs. H. H. Warner & Co., proprietors of Warner's Safe Cure, have fought for and promulgated for the past ten years. We know of scores of cases, where doctors have treated the wrong disease. They say advanced Kidney Disease cannot be cured, yet thousands of cases have been cured with Warner's Safe Cure; yet so bigoted are the medical profession that the majority of them will not use it, although they know they could thereby save many valuable lives, because, forsooth, it is against their fossilized code. Out upon such bigotry.



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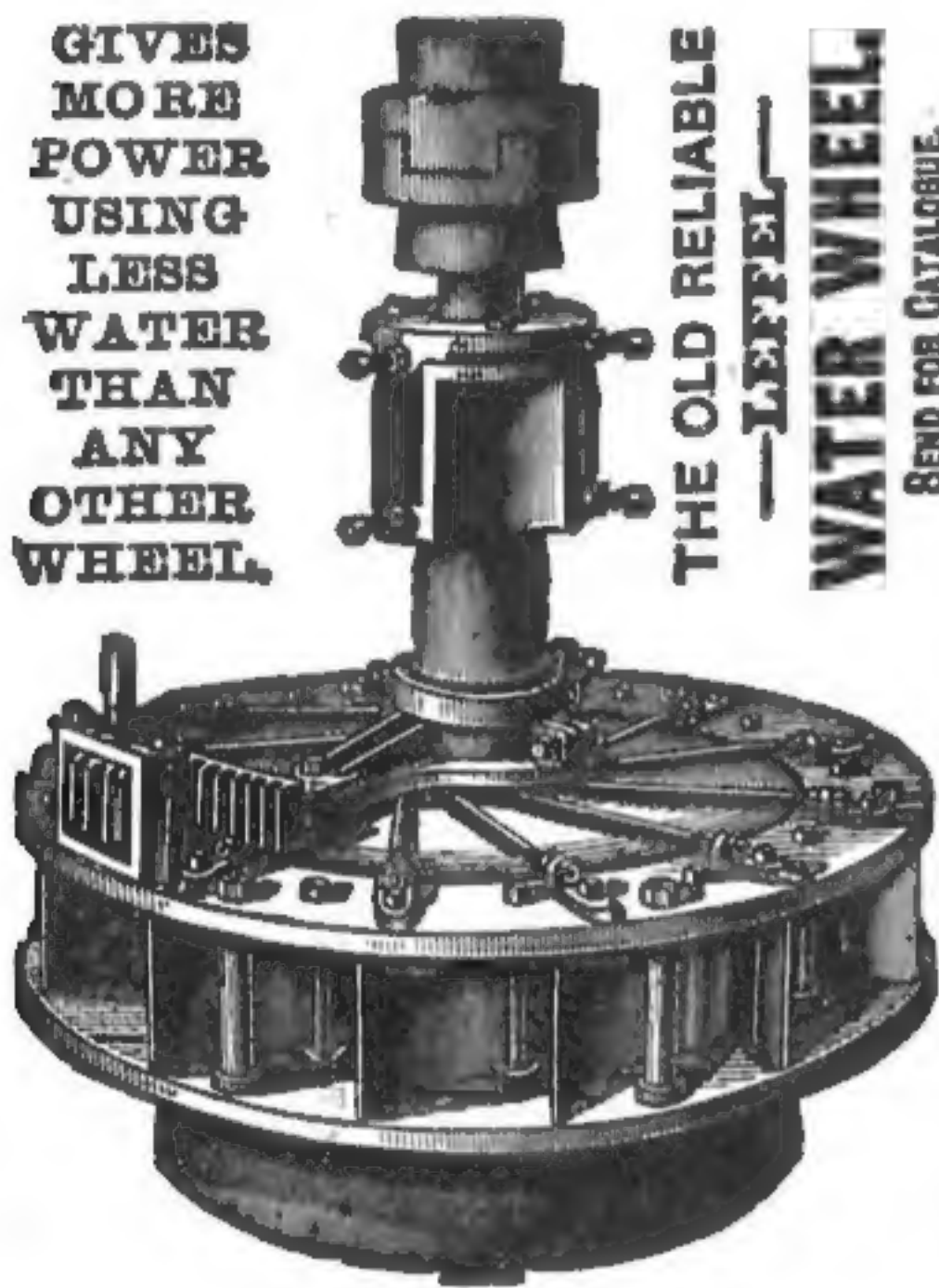
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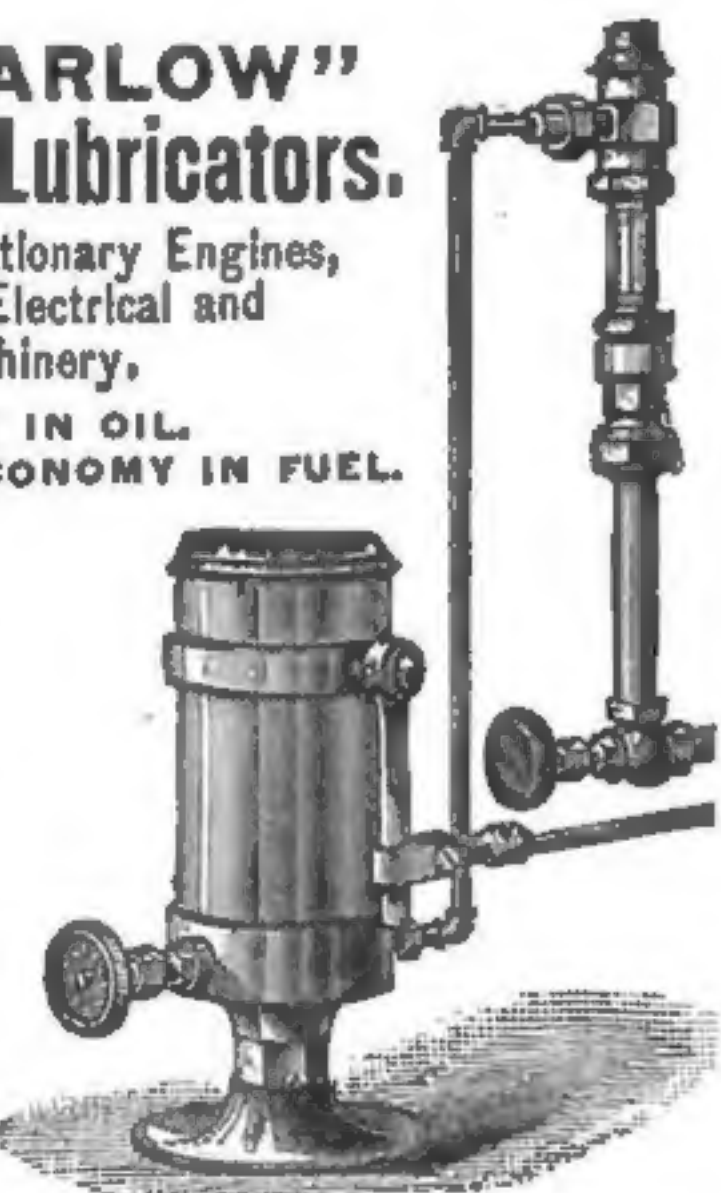
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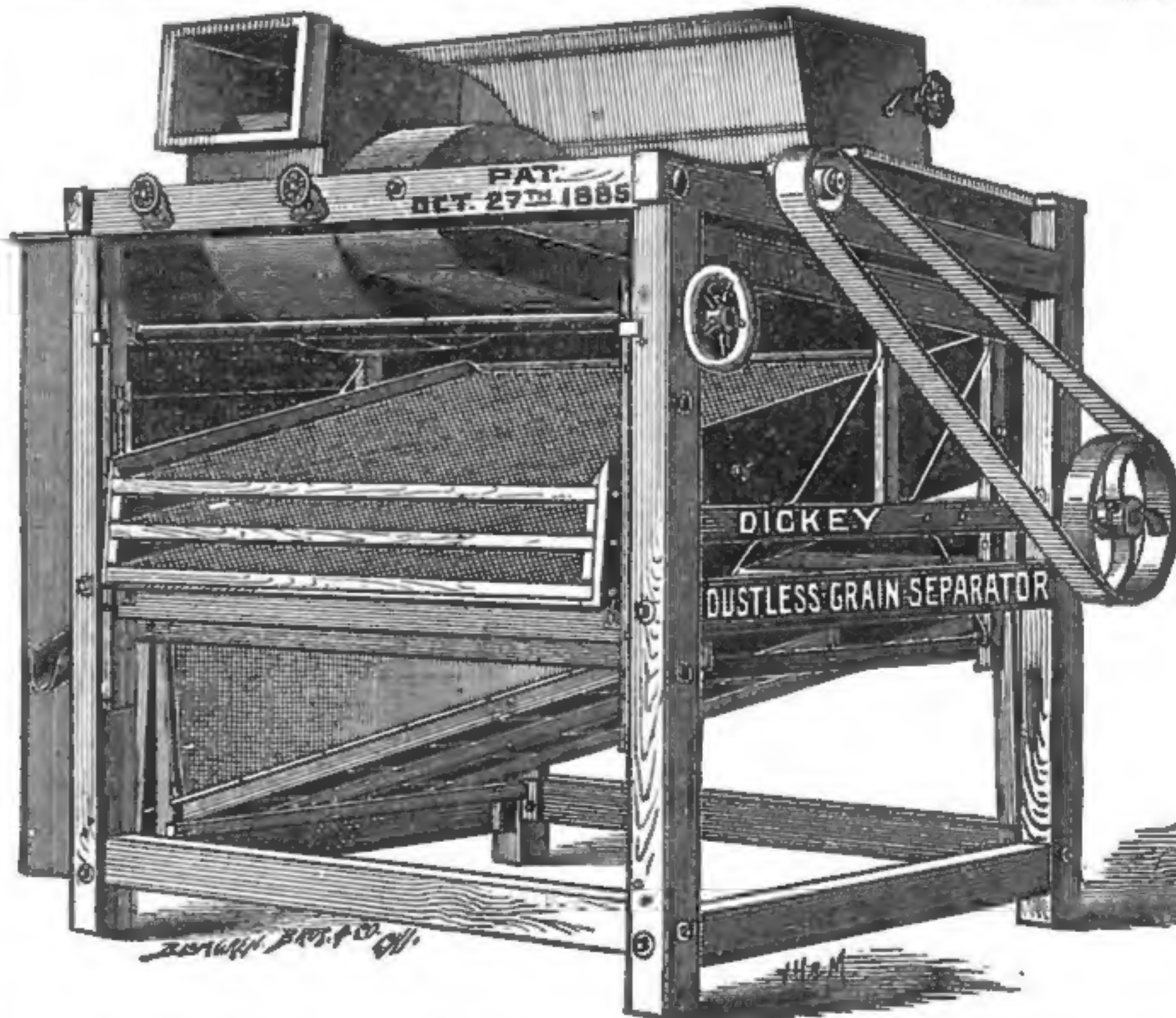
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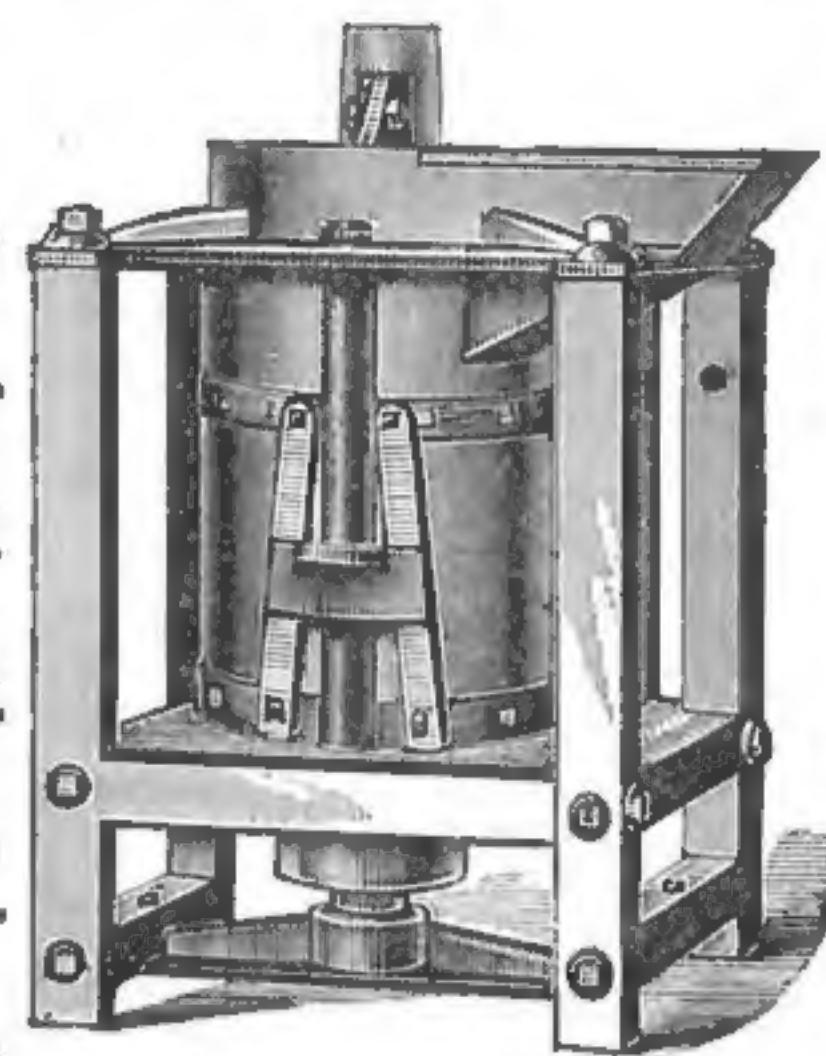
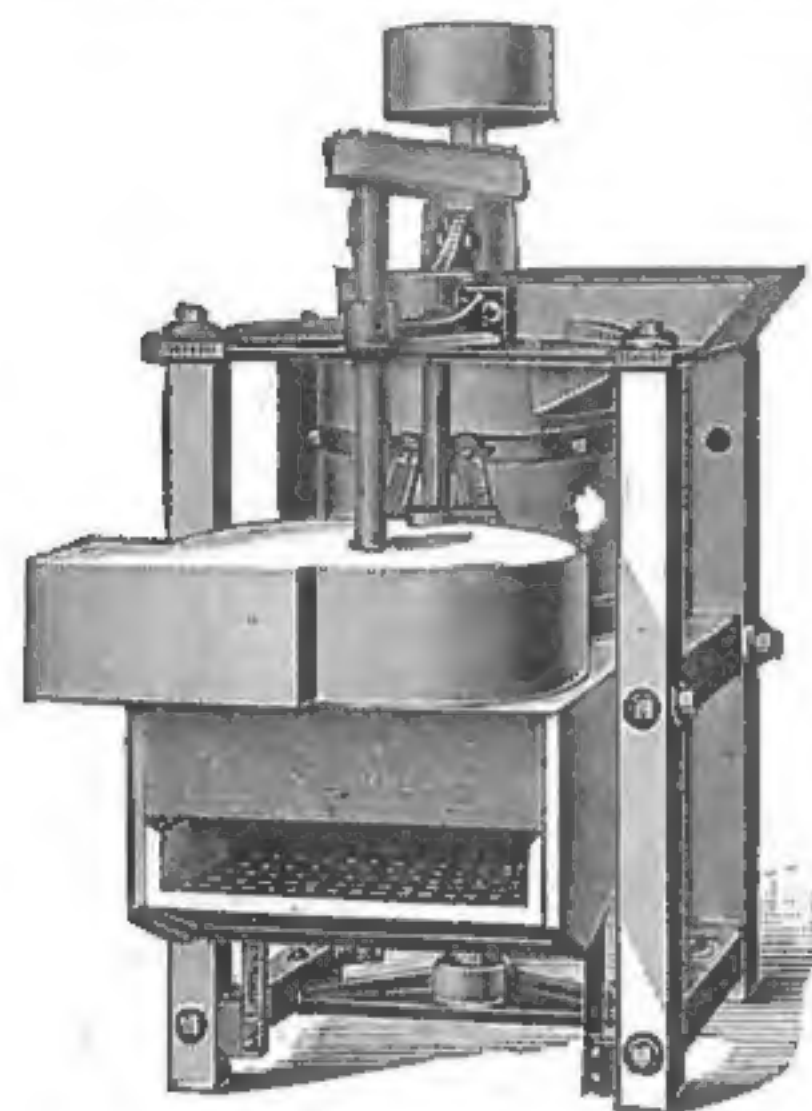
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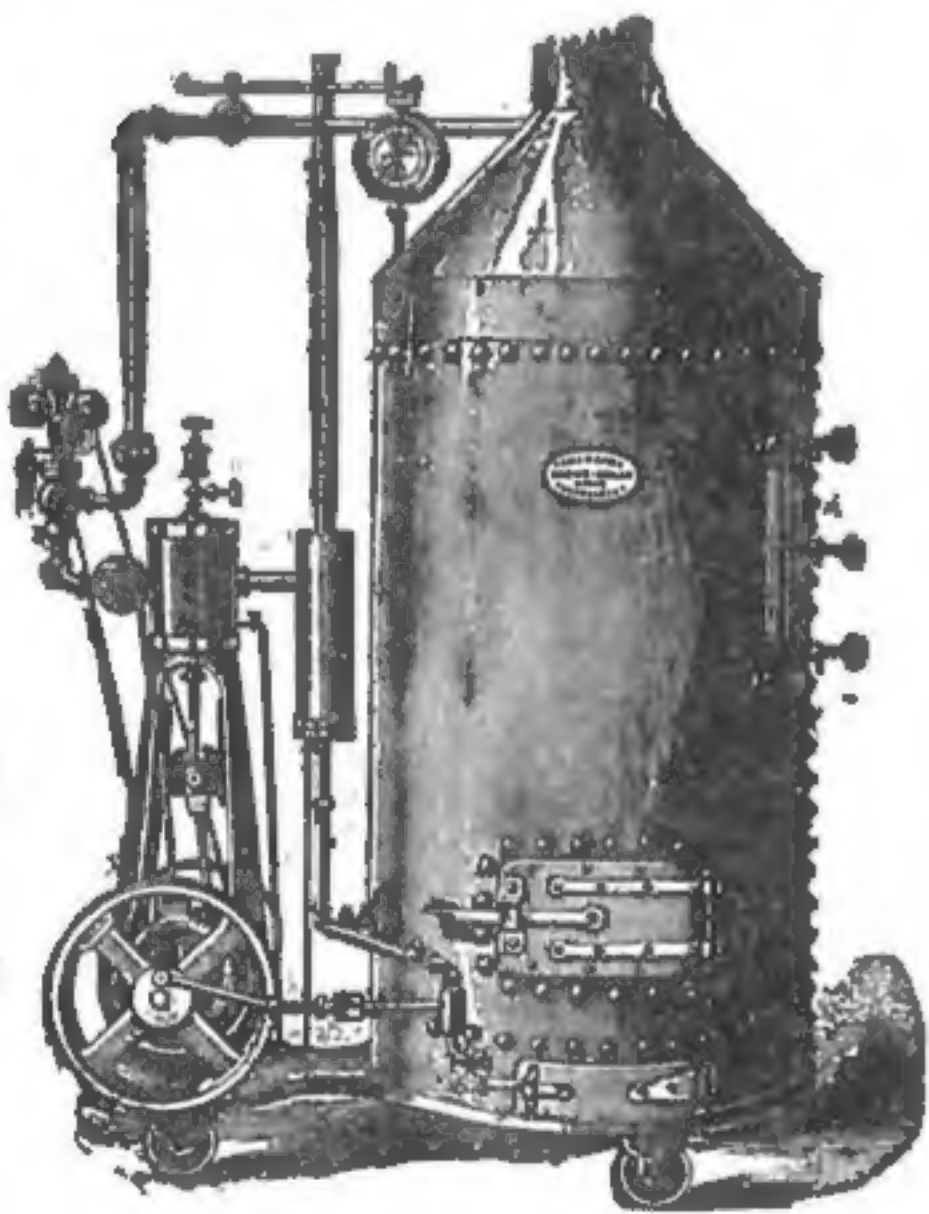
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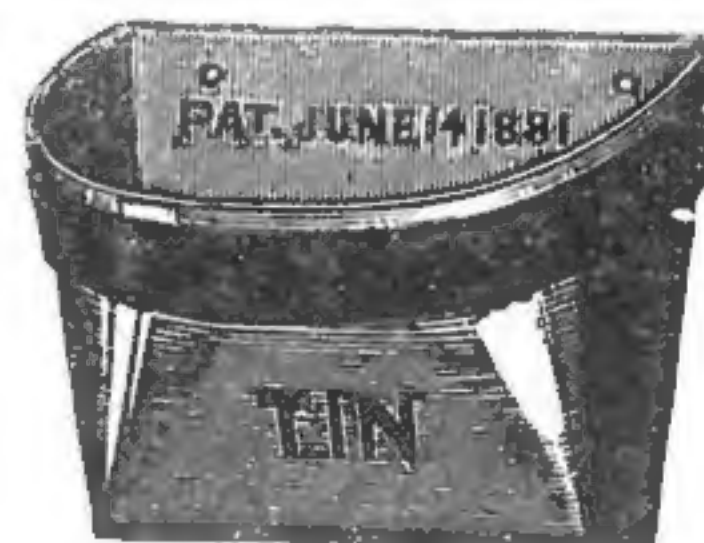
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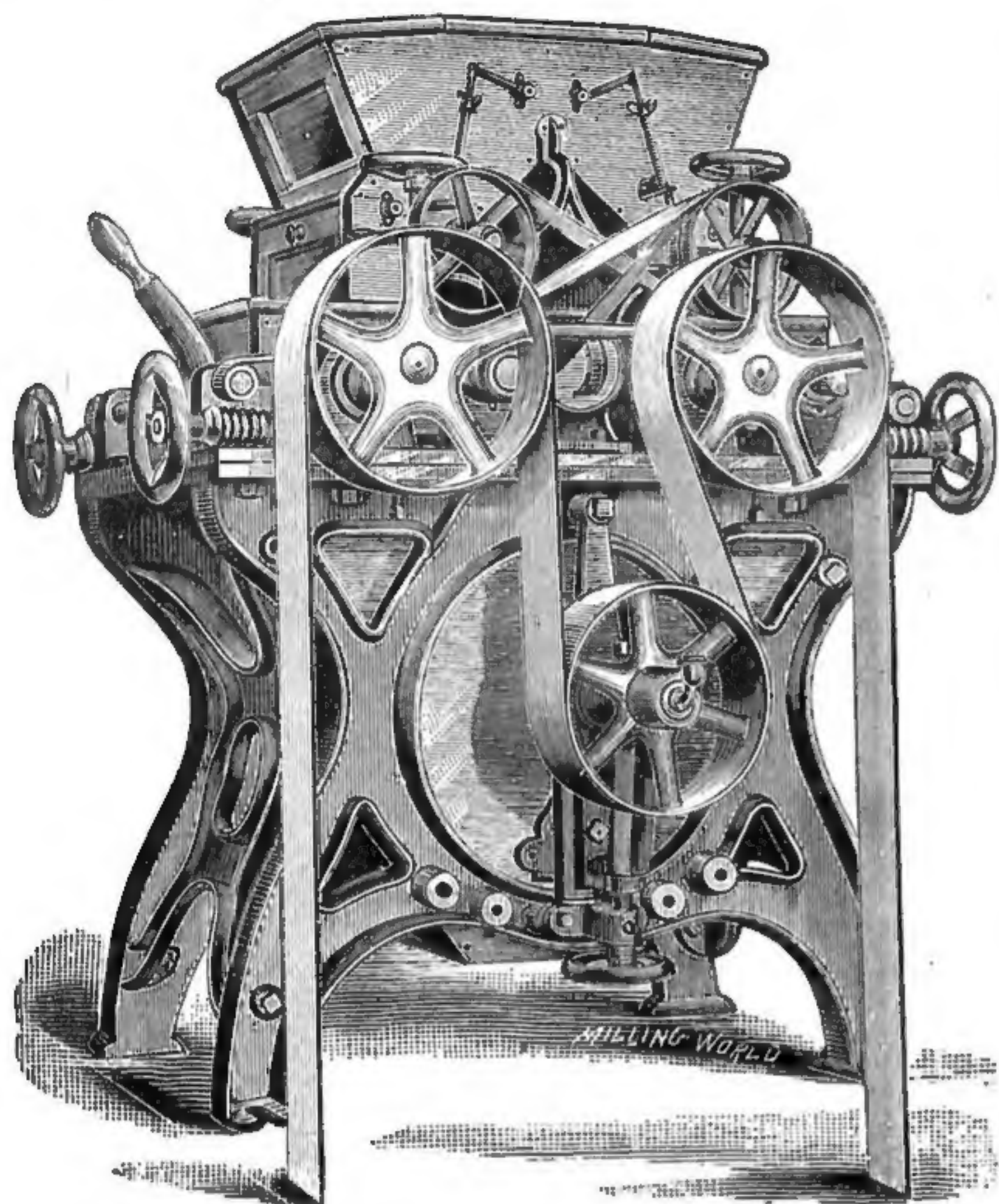
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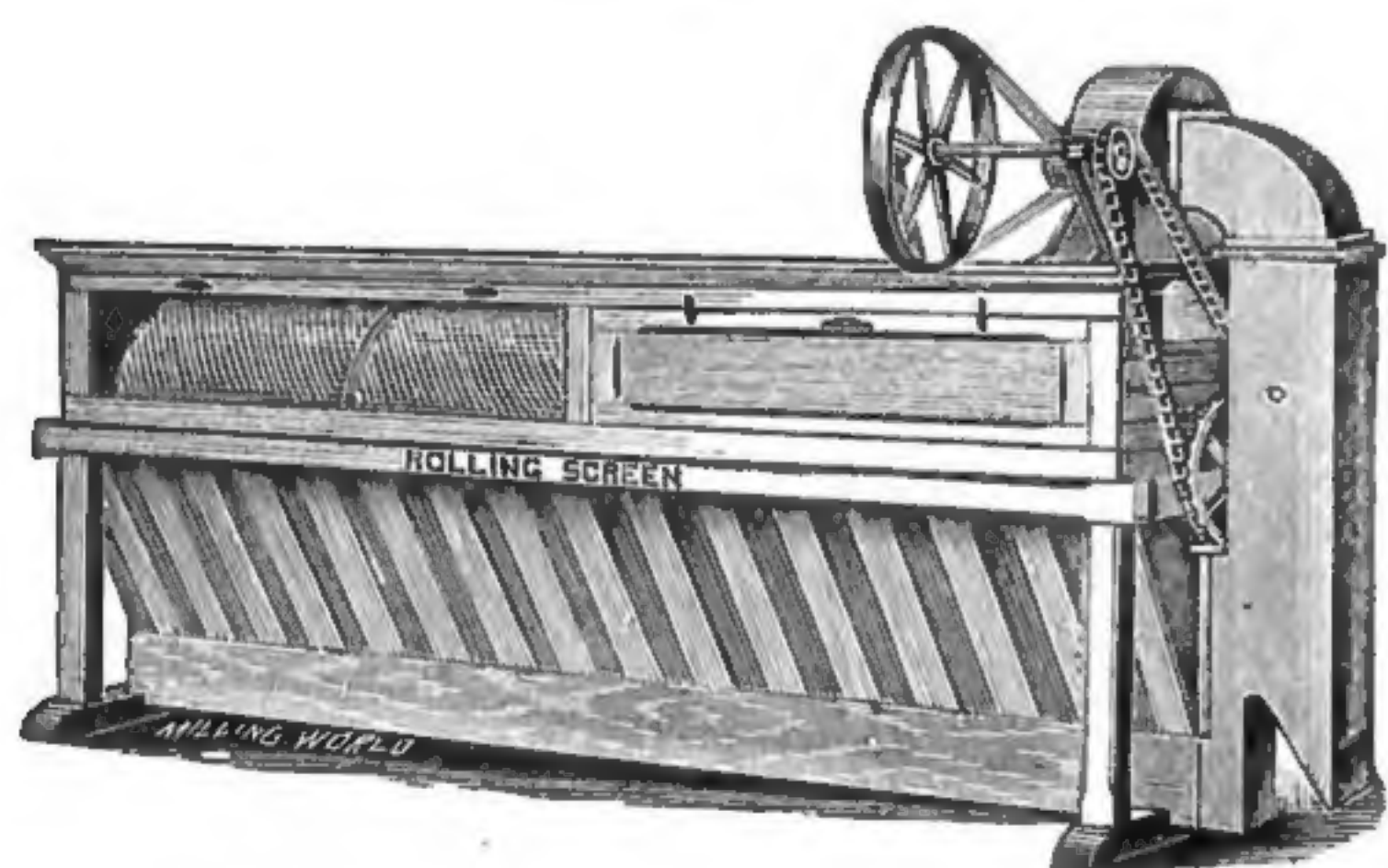
"The Rickerson." The original six inch 4 Roller Mill. We now own the patents on this mill and after greatly improving the mill manufacture them in four sizes:

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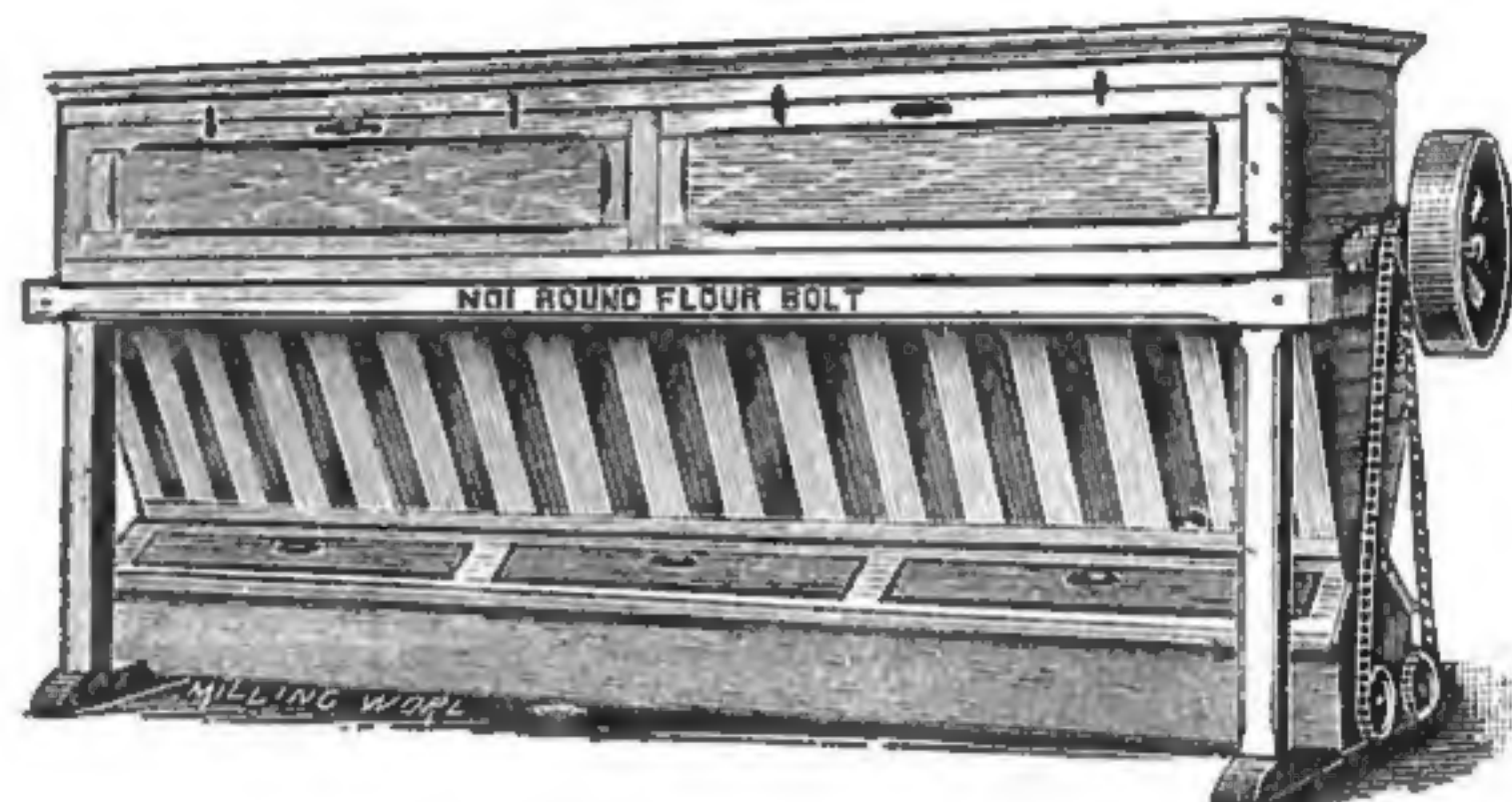
6x15 "

6x20 "

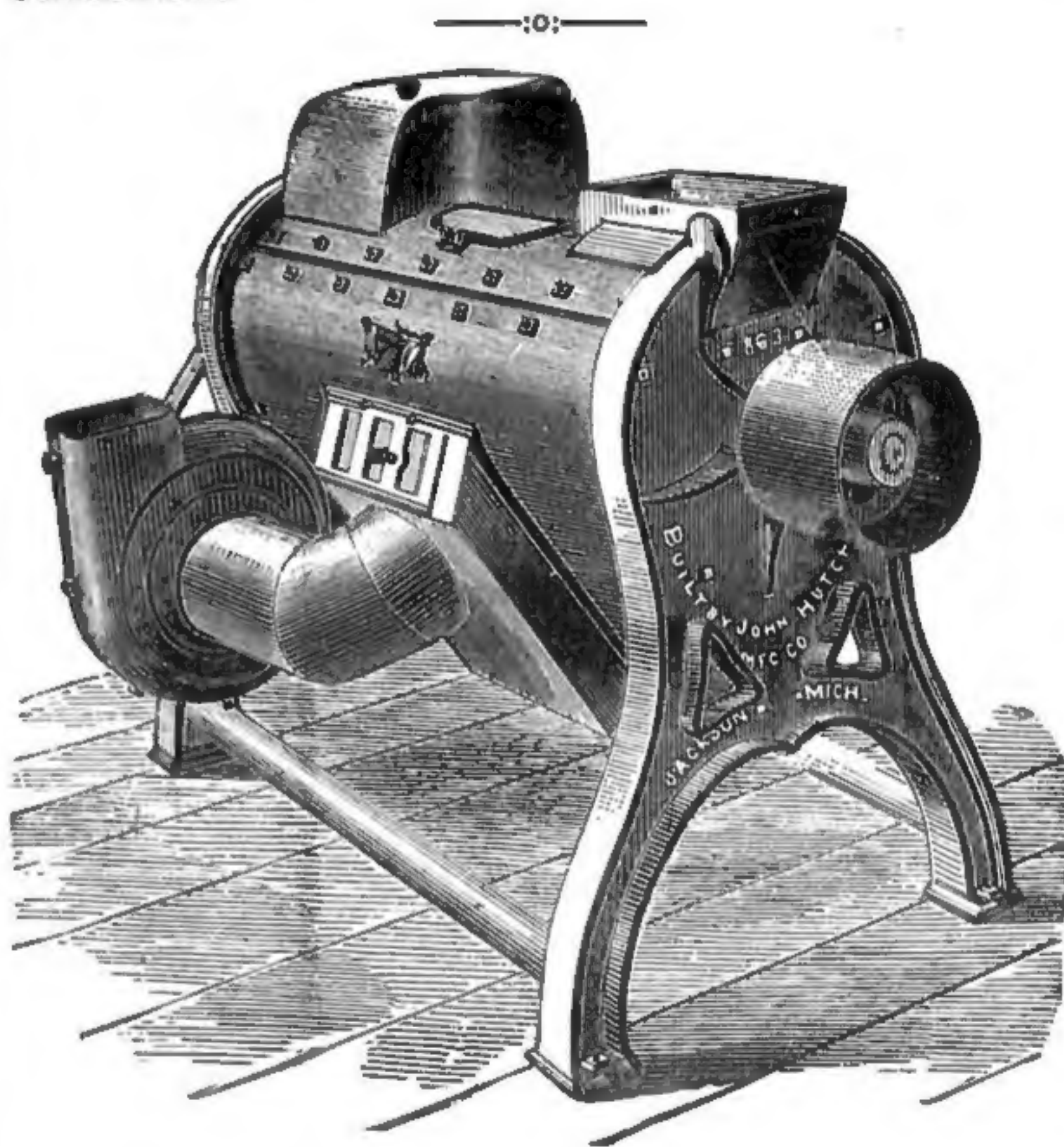


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Send for Estimates for Our Full Roller Mills of any Capacity.



The above cut shows our New Round Slow Running Flour Bolt. We also build a Cylinder or Round Scalping Reel and we have lately built a number of new mills of medium capacity, using our Roller Mills, our Round Flour Bolts and Scalping Reels, getting better results than is usually obtained.



Hutchison's New Dustless Iron Corn Sheller, especially adapted for Mill and Elevator use.

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**PLEASE NOTICE.**

Our patents not only cover Seamless, Drawn, Stamped, Pressed or Forged Elevator Buckets; but also Pre-Date and Cover Round-Cornered Elevator Buckets when made Seamless, and are the Only patents ever issued in the World for a Pressed, Stamped, Drawn or Forged Seamless Elevator Bucket.

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CLAY BUCKET.



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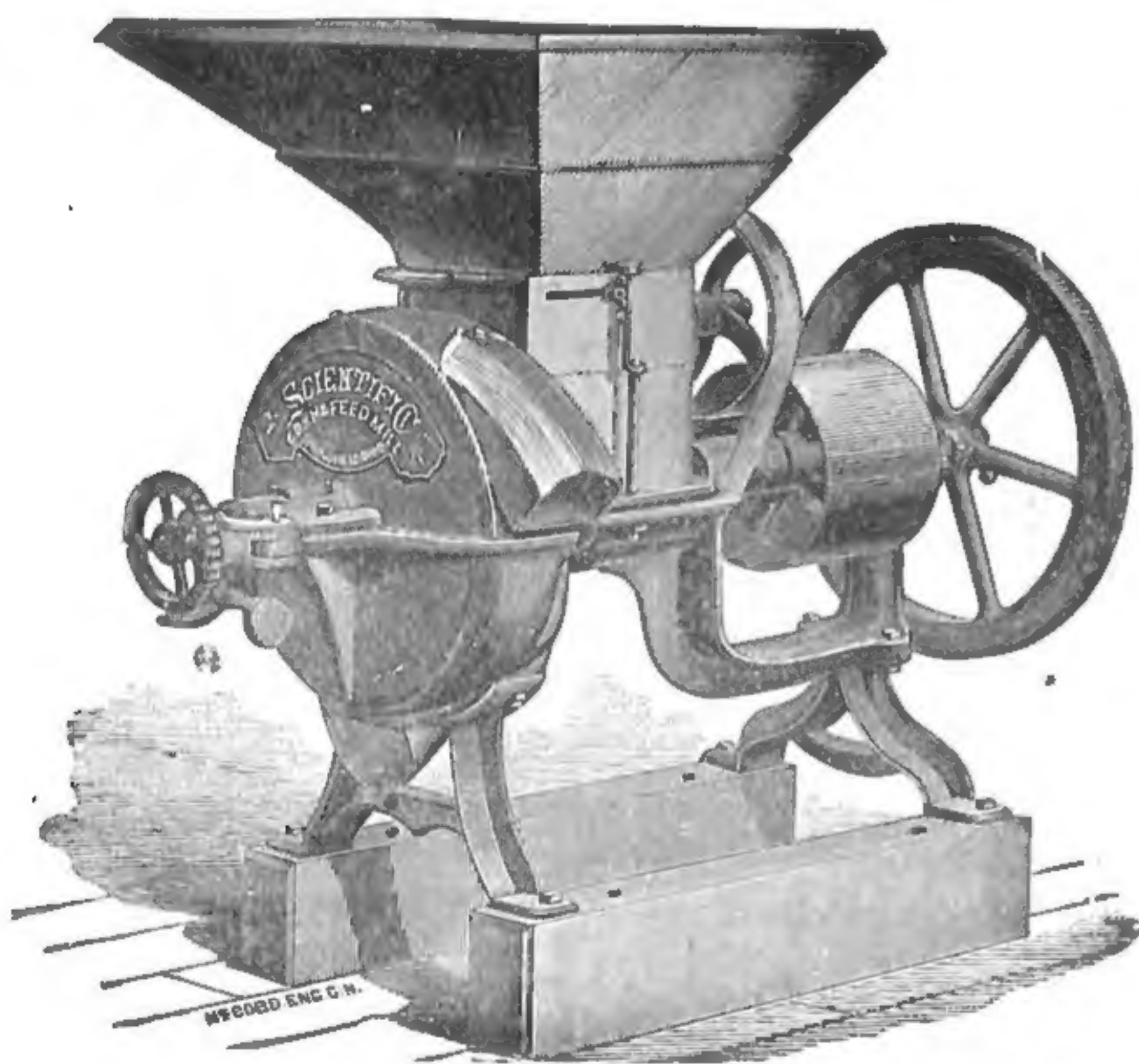
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GRINDS PERFECTLY, EAR CORN, SHELLED CORN,  
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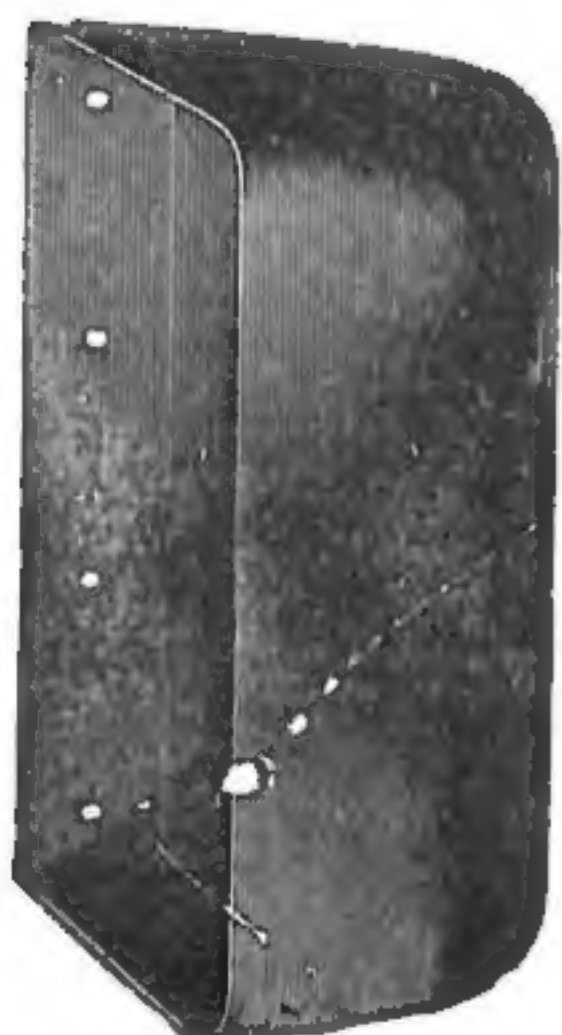
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*Hard as Steel, Guaranteed to Grind from Five to Eight  
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## THE FOOS MFG. CO.

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## SALEM

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